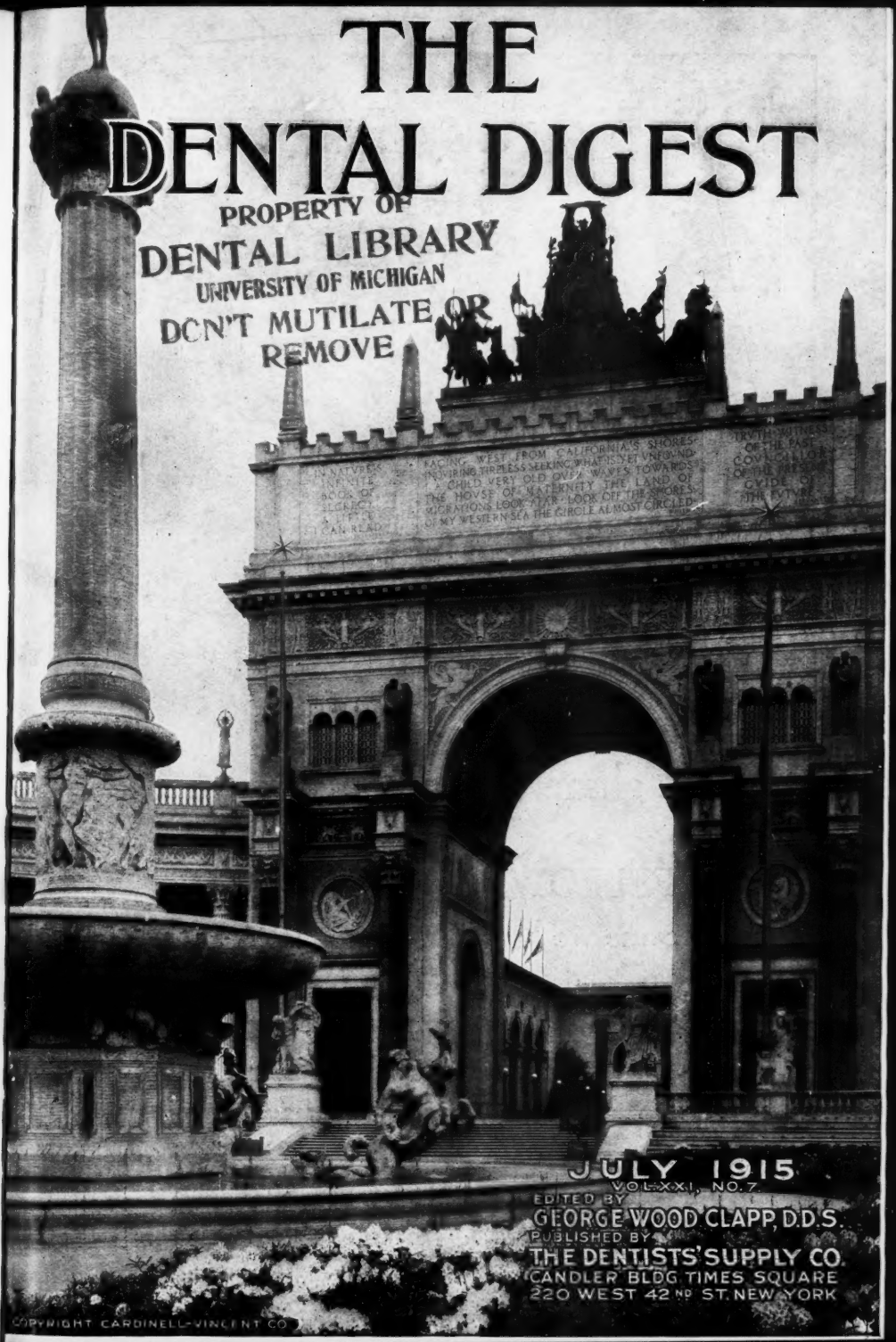
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THE DENTAL DIGEST

GEORGE WOOD CLAPP, D.D.S., Editor

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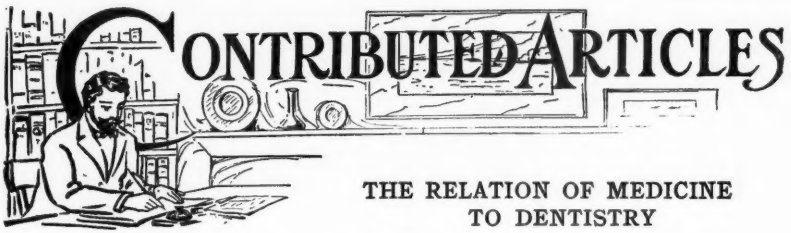


THE RELATION OF MEDICINE TO DENTISTRY

BY WILLIAM J. LEDERER, D.D.S., NEW YORK CITY

Dental Consultant to the German Hospital in New York

FIFTH PAPER

SYPHILIS

GENERAL CONSIDERATIONS

Syphilis or lues is an infectious disease caused by the presence of the Spirocheta pallida or Treponema pallidum, which finding entrance through the integument causes a violent local irritation, the result of which is the so-called initial lesion or chancre.

The spirochetæs or their toxins cause a severe irritation producing a lymphangitis and endarteritis with the formation of connective tissue.

Nature seems to utilize fibrous tissue elements as a sort of protective measure, as infected foci are always more or less walled in by connective tissue of some type. This formation of connective tissue accounts for the marked induration surrounding the luetic sore or chancre.

From the chancre there occurs an invasion of the lymphatics producing adenopathics (involvement of the lymph glands, which becomes pal-

pable and slightly painful to pressure); these adenopathics may or may not be easily discernible during the early stages of syphilis. By careful palpation however, they can be elicited. G. M. MacKee in speaking of lymphatic invasion in syphilis mentions what he calls "the pilot gland," which is the largest node in that chain of slightly enlarged glands which drain the region wherein the chancre occurred.

This solitary or pilot gland may persist for some time after the initial lesion has entirely disappeared. He was consulted by various patients, for an outbreak of syphilitic rash, who denied the possibility of infection but in all of whom he was able to locate the scars of the chancres by the presence of this satellite or pilot gland. For illustration he cites the following:

It was impossible to locate the remains or to obtain the history of a chancre in a certain young man who presented an unquestionably syphilitic eruption. Repeated examinations revealed an enlarged gland at the left side of the neck. Thinking this might be a pilot gland he carefully examined his mouth, nose and throat but failed to find any scar. The patient denied ever having had any sore or pain in these regions. While speaking to him however, MacKee noted that he was deaf in the left ear and on being questioned the patient stated that his deafness was of recent date, that he had been suffering from catarrh of the ear which had become worse upon treatment and that it terminated with his loss of hearing on that side. The patient was referred to a rhinologist who examined the Eustachian tube and found the remains of a chancre situated in the Eustachian tube. The infection undoubtedly occurred through the agency of a Eustachian catheter. It was only through the discovery of the satellite or pilot gland in this case that the possibility of a Eustachian chancre was thought of. This illustrates the importance of careful search for adenopathics and their interpretation.

From the lympatics the spirochetæ invade the perivascular spaces and finally find entrance through the walls of the blood vessels into the general circulation, thus invading the whole body through both the lymphatics and the blood stream. The spirochetæ thus gaining admission through the chancre can be found in all tissues of the body and it is evident therefore that delay to institute thorough systemic treatment from the very beginning is dangerous practice.

Syphilis is usually divided into three stages according to its symptoms. The primary stage when the initial lesion is noted, the secondary stage when the roseola (rose colored rash) makes its appearance, and the third stage which is marked by the formation of gummata causing the destruction of tissues and organs with its endless variety of symptoms.

Syphilis produces grave changes in the blood vessels and no other

pathologic process impairs the general vascular system so markedly excepting perhaps renal disease.

In order to obtain entrance for the spirochetæ there must be a loss of continuity in the skin or mucous membrane, for if syphilitic virus be placed upon unbroken skin, infection will not occur. Broken skin, however, does not necessarily mean a wound; a hangnail may become the point of entrance for the organism, and the dentist should be very careful about his hands and fingers.

Though the clinical progress of syphilis is divided into three stages, extending over a period of months or years, it is of the highest importance to remember that with the appearance of the chancre, the disease has existed for some time; true only locally, but with the development of the chancre (which occurs 10-21 days after infection) there takes place lymphatic involvement and it cannot be stated when syphilis ceases to be local and when systemic invasion begins.

For this reason the excision of the chancre is of doubtful success. The main spirochetic focus is removed by the operation but the entrance of a half dozen micro-organisms into the system is just as much syphilis as an invasion of a greater number.

If an operator wounds himself upon a syphilitic in a florid (contagious) state and the wound is at once treated with mercury, i. e., $33\frac{1}{3}$ per cent., calomel ointment, vigorously massaged into the break of the skin, and a dressing of this ointment applied, there is a reasonable possibility of avoiding infection. It must be remembered however, that there is no chancre formed at this time.

The first visible symptom of syphilis is the chancre; this may or may not be followed by headaches, slight malaise or a tired feeling in the limbs and a rise in temperature.

The next signs are the adenopathics; these may be so slightly expressed as to escape notice. Not infrequently patients will present with tertiary lesions truthfully denying the observation of previous symptoms of the disease.

The entrance of the spirochetæ into the lymphatics is followed by a general lymphangitis and after about 6 weeks, following the development of the chancre, the roseola and papule formation are noted. The syphilitic rash, according to Larned, has a predilection for certain portions of the body.

The lower two thirds of the chest is the most common seat of secondary eruptions and the following is the order of frequency in occurrence: The abdomen, front of legs and thighs, flexor surfaces of arms and forearms, back of neck, scalp, beginning at forehead (corona veneris), posterior surface of thighs and nates, posterior surface of legs, back, posterior surface

of arms, face (least often attacked, except in severe forms), palms of the hands, soles of feet.

The secondary eruption of syphilis may appear in several forms.

1. As a mere rash (roseola) these spots (syphilides) are superficial. They are situated in the corium of the skin and extend only superficially; only the epidermis overlying the syphilide is destroyed and this is replaced by new epidermis; if the lesion is not infected by other micro-organisms, no suppuration takes place, and new epidermis forming, there is *no scar left*. There is, however, a deposit of pigment, probably due to hyperemia or actual bleeding; these are of a ham or copper color. This rash may disappear after a few hours, or remain for a few days, probably depending upon the degree of sub-epidermal inflammation. The rash is symmetrical on both sides of the body, i. e., bilateral. The roseola disappears on pressure.

2. The roseola may be followed by papules which are known as syphiloderma or cutaneous syphilides. These eruptions can be looked upon as a severer type of the rash as there occurs in syphiloderma, an infection of the original syphide by pyogenic organisms and the syphiloderma or syphilitic papules are slightly indurated; they feel like pimples. A good deal has been written upon the various types of syphilides and they are still the object of much study; it is however, not within the scope of this paper to dwell upon the minutiæ of the various types of secondary skin lesions in syphilis.

The secondary skin lesions are of two types

1. Syphilides—Roseola
2. Syphiloderma—Papules.

The latter is always preceded by the former, while the former is not always followed by the latter. The latter seems a severer type of inflammation than the first. The roseola disappears upon pressure, does not leave a scar; the second variety does not disappear upon pressure, and though not leaving a scar, leaves a slight depression and a pigmented area which may remain for some time.

The presence of other skin lesions may mask the syphilitic picture so that the diagnosis by inspection may become very difficult.

The secondary stage varies in duration; some cases present syphilides (roseola) for only a few hours and do not develop tertiary lesions for many years; in other cases the secondaries are followed rapidly by lesions characteristic of the third stage. The secondary stage, however, is considered to last from about a year to eighteen months.

After the secondaries are passed the disease enters into the tertiary stage wherein the periosteum and the internal viscera suffer from peculiar growths of newly formed tissue. A most constant lesion is characterized

by the formation of this new tissue consisting of spheroidal and polyhedral cells scattered with giant cells, poorly supplied with blood vessels, and having a marked tendency to coagulation necrosis, hyaline degeneration and later caseation. The growth of this new tissue is usually circumscribed in nodes, and it is in these masses that the necrotic processes occur. These formations are known as gummata and appear as dirty, firm masses which on section often are found to be caseous in the centre (Hare).

These gummata may occur anywhere; in the liver, in the brain, on the extremities, in the mouth or lungs. The manifestations of tertiary lues may not appear for many years and the patient may not know of his condition, assuming that after the healing of the chancre and the disappearance of the roseola, he is cured. He may years later complain of headaches and exhibit symptoms of a cerebral tumor, which at an autopsy proves to be a gumma of the brain; or the patient may complain of eye trouble, which turns out to be optic nerve atrophy of syphilitic origin. Or he may develop locomotor ataxia, disease of the liver, osteomyelitis or an aneurysm, all of which may be the result of syphilis. Fully 80 per cent. of all tabes and the majority of aneurysms of the aorta are postsyphilitic. Tertiary syphilis may involve any part of the body. There is no disease which is so treacherous when not fully treated as syphilis. No sign of syphilis may be noticeable, the patient marries and his wife becoming pregnant, can not bear a child to full term. She aborts repeatedly; in absence of other disease this is a very suspicious moment and may be the result of either paternal or maternal syphilis. Pregnancy may, however, go to full term but a still birth result, or a living child may be born which sooner or later develops signs of congenital or hereditary syphilis.

150 EAST SEVENTY-FOURTH STREET.

(*This article is expected to be continued in the August issue*)

A FORSYTH LOVING CUP

Dr. Belcher, Editor of Oral Hygiene, suggests that the dentists of this country present to their societies and to The National Dental Association the matter of a loving cup to be given to Mr. Forsyth in recognition of the contributions which the Forsyth Brothers have made to the welfare of the community and to good dentistry. It certainly seems as if some recognition of the beneficence of the Forsyths should be accorded, and perhaps nothing would be better than a cup of this sort.

APPENDICITIS FROM THE PATIENT'S POINT OF VIEW

Much has been written about appendicitis from the viewpoint of the surgeon or physician, but little from the patient's viewpoint. I know now that I have suffered from the chronic form since boyhood and that numerous sub-acute attacks have occurred and have been referred to some other cause. I have paid a big price in misery and loss of physical energy and money for the inability to diagnose this trouble. Several acute cases have occurred in my family, and I have been familiar with the stories of many others, some of which have resulted in death from unwillingness of the patient or family to have an operation or from lack of skill on the part of the physician to make a diagnosis.

I want the readers of this magazine to have this first hand information on the subject, because many of them have this trouble and are referring the manifestations to other organs, or are postponing an operation in favor of local treatment. If you can determine that you have a chronic appendicitis, for your own welfare, have the appendix out.

My thanks are due to Dr. J. W. Draper and Dr. D. E. Drake for assistance in the preparation of this article.—EDITOR.

Appendicitis is, as the name indicates, an inflammation of the appendix. There are two rather sharply marked degrees of this inflammation, the chronic and the acute. Both are capable of serious developments.

ACUTE APPENDICITIS

is marked by the symptoms common to acute inflammations. The pain is often very severe and may be misleading, since it may be referred to the stomach or the centre of the abdomen up to the time of pus formation. There is generally nausea and vomiting and a blood-count will reveal a greatly increased number of white blood cells.

In many cases the acute stage clears up of its own accord or under rest,* without an operation. If the condition goes on to pus formation, the appendix is sure to rupture unless it is removed. The result of such a rupture is either fatal, or causes prolonged illness and slow recovery. Acute appendicitis is merely an acute stage of chronic appendicitis, and the recovery from the acute condition is merely a relapse into the chronic condition. It is doubtful if acute appendicitis ever occurs in a healthy appendix.

From the experience of several cases of acute appendicitis in my own family and among friends, and knowledge of many cases at the hospital within two blocks of my home, my belief is that the only intelligent treatment for acute appendicitis is surgical. I have known many attacks to come upon persons apparently healthy and reach the stage of pus formation and impending rupture in twelve hours, and an immediate opera-

*I know of no treatment except rest. It is a favorite professional pipe dream that one can alter an appendicitis by any form of *treatment*. J. W. D.

tion to be just in time. I have known the stories of many cases where operation has been postponed in favor of other treatment, with fatal results. As the result of this knowledge no member of my family having an attack of acute appendicitis would hesitate at immediate operative treatment.

CHRONIC APPENDICITIS

This condition is characterized by a low-grade or sub-acute non-suppurative inflammation of the appendix and adjoining tissues. Chronic appendicitis is the medical name for "biliousness" and for the old-fashioned "green-apple bellyache" of youngsters.

Chronic appendicitis is much more common than is generally known, is the active cause in many physical troubles which are referred to other organs, and, aside from immediate danger to life, is perhaps of more serious import than acute appendicitis. Acute attacks are merely acute stages of chronic appendicitis, and the chronic condition is pretty sure to remain until an acute attack forces an operation, or some other condition arising from it necessitates treatment or death.

Chronic appendicitis is dangerous because the patient is always exposed to the danger of an immediate and perhaps severe attack of acute inflammation, perhaps necessitating operative treatment at a time and under conditions when such treatment cannot be properly given.

Chronic appendicitis is dangerous because the effects are often extensive and serious even if no accute attack occurs, or occurs and is not recognized. The presence of the irritation affects the functions and finally the structure of the other intestines. It is believed that about 80 per cent. of cases of chronic or recurrent indigestion owe their origin to chronic appendicitis with or without complications. Many cases of chronic constipation arise from the same origin. The continued inflammation weakens the walls of the colon and caecum and permits them to distend and to act as storehouses for material which should pass on rapidly. This material gives off poisons which are absorbed, and auto-intoxication occurs.

A continuation of the irritation permits the weakened walls to become infected. The person then becomes a physical derelict, relieved only by death, or becomes the subject of an extensive operation by which portions of the gut are removed. This operation shows a majority of cures, but is by no means certain of success.

Chronic appendicitis may give rise to duodenal ulcer, the only cure for which is an operation.

Chronic appendicitis exerts another effect upon the body which is more difficult of detection. The interference with the eliminative action

of the bowels is likely to be followed by interference with the eliminative action of the skin, and the body is slowly stored with poisons which should have been long since eliminated. The results may or may not be serious according to circumstances.

Chronic appendicitis has long escaped proper recognition because many of its results are so often referred to other organs, such as the stomach or liver, and have been treated as diseases of those organs. It is now known that the stomach and liver are rarely diseased, save as the result of diseases elsewhere, and modern methods of diagnosis are locating the cause with increasing frequency in the appendix. It is believed that more than a majority of all persons have some degree of inflammation of the appendix.

Even an extensive and long standing chronic appendicitis may be very difficult to diagnose. It may be complicated by stomach symptoms, by auto-intoxication, and perhaps by general fatigue in persons who work very hard. There may be no pain at the appendix, or that can be traced to it, and even X-ray findings may be negative in that region. Constipation, auto-intoxication, physical and mental depression, headaches, frequent morning nausea, extensive gas formation, slight local discomfort, and enlargement of the adjoining intestines, may all be regarded as contributing to a diagnosis.

TREATMENT

The treatment of appendicitis is surgical removal of the appendix and any other tissues too seriously affected to be capable of a return to health. Since acute appendicitis is only a manifestation of chronic appendicitis, this statement applies to both forms.

The time for treatment is when the diagnosis is made. If this can be made while no acute attacks are present and there is neither acute inflammation nor pus, the person's recovery will be very much more comfortable and rapid, and the chances of a successful termination are greatly increased. The chances of a favorable recovery in the absence of acute attack, are 8000 to 1 in the patient's favor. In acute attacks without rupture of the appendix, they are about 80–90 in 100. In cases of rupture they are from 50–60 in 100. Since the patient's chances are 100 times greater when the operation is performed in health, the wisdom of seeking to perfect the diagnosis and perform the operation in the absence of an acute attack is obvious. An operation performed under these conditions generally allows of the patient being set up in 8 or 9 days. Following an acute attack the patient may not sit up in 2 weeks. I walked 8 city blocks and went to the theatre on the 8th night. The patient in the next room following an acute attack, had

been in bed two weeks and was not likely to leave the hospital for two weeks more.

PREPARATION FOR THE OPERATION

Much can be done to promote the patient's comfort by proper preparation for the operation. Care should be taken to insure good bowel movements daily for a week in advance, without greatly inflaming or irritating the bowel walls. Food should be taken moderately and very well chewed.

On the 1st, 3rd and 5th nights before the operation, an enema of from 1 to 2 quarts of water and Castile soap, at a temperature of about 110° should be taken in the following manner: The patient should lie on the left side with the buttocks well elevated above the shoulders. The bag should be elevated not more than 18 inches above the buttocks and the water allowed to flow from five to ten minutes. The patient should then turn on the face, with the hips still elevated, and remain five minutes. Then five minutes should be passed on the right side with the same elevations. The enema may then be voided. These positions permit the water to follow the curvature of the intestine. Enough phenolphth-aline may be taken each night to insure an easy movement. Comfort may be increased if, on retiring, a tablespoonful of Russian Oil be taken.

Under these conditions a patient in good general health who is to be operated upon about noon, may eat a light meal of cereal, egg, toast and coffee, on the morning of the operation at not later than 7, and yet have the bowels so clean that few gas-pains will follow the operation.

It should be satisfactory if the patient thus prepared reaches the hospital about 2 hours before the operation. This gives time to prepare the field with iodine, to employ an enema of glycerin and water, and to give a quieting dose of morphine. I reached the hospital at 10 A. M., and the operating table at noon.

THE ANESTHETIC

The patient's comfort will depend very largely upon what anesthetic is employed and who uses it. If he is to be saturated with ether or chloroform, in the old way, nausea, vomiting and discomfort for some hours may be expected. If up-to-date anesthetics are employed in an up-to-date manner, the patient will not be saturated, there will be no nausea, and the patient's comfort will be greatly increased.

I was given first nitrous oxide and oxygen; this was followed with a warm vapor made by passing oxygen through ether, and all through a heated coil. I went to sleep in less than 15 seconds and never made a motion or had a sensation for 1½ hours. There was no nausea afterward.

AFTER THE OPERATION

In the hands of the skilled and careful surgeon, there is little to be feared from the operation. The patient's comfort will depend largely upon what patience the surgeon has exercised. One of the most dreaded discomforts following an operation is "gas pains" caused by the fermentation of food present in the intestines as the result of the paralysis of the intestines from handling. These may be largely avoided by the enemas and cathartic described. If the surgeon keeps gauze away from the wound and from the intestines, and handles the intestines only with rubber gloves, and gently at that, the paralysis will be less extensive and lasting and the gas pains much less uncomfortable. The gas pains are always less when there is no acute inflammation. In my case, they examined by feeling, practically all of the intestinal tract, but owing to the care with which it was done, there were no gas pains.

The opening of the abdominal cavity produces considerable shock and the patient should allow two weeks for complete rest and a month or more to fully regain health before returning to work.

CONCLUSION

Chronic appendicitis is much more common than is generally known, and is frequently the active agent in supposed illness of the stomach and liver. It often produces serious or fatal results. It interferes with elimination and causes the storing of products which hasten the ravages of age. It is the most frequent cause of "bilious attacks."

Acute appendicitis is merely an acute manifestation of a chronic condition which by no means disappears with the subsidence of the acute attack. The acute condition may supervene with great speed and violence, and may prove fatal in a few hours.

The treatment for appendicitis is operative as soon as the diagnosis is certain.

The patient's chances for a happy recovery are 100 times greater if the operation occur in the absence of acute inflammation or pus formation, but it is not safe to postpone operation through an acute attack on that condition, if the case is seen early.

Medical science at the present offers no contra-indications for operation in acute or chronic appendicitis, save such as might arise from very rare and unusual conditions.

THE ARMY DENTAL CORPS

By Raymond E. Ingalls, D.D.S., Vancouver Barracks, Washington

The young man aspirant for a commission in the Army Dental Corps who does not expect to increase his civilian practice to more than $6,000 gross per year will probably be perfectly contented in the army. There are other things to be considered. The pocketbook bordering nearest the heart, vulgar money is mentioned first. We of the army do not have a home and can never expect the real home-felt pleasures—that is, in the sense that a civilian owns his home, does with it as he pleases, and considers himself permanently located. An army officer serving with troops and worth a million could not build or buy a house on or off a military reservation and enter it to live. On the other hand, we do have a most secure and enjoyable home life; we are free, and away from the struggle for survival amid the rushing throngs of the business world.

Members of our corps consider themselves fortunate if they remain at one post a year without trips to other stations, at least for temporary duty. The writer has had forty-eight changes of station in eight years, including tropical service in the Philippine Islands and a tour of duty in Alaska. This is not thought to be a record. The average conception of travel to the person not favored with the opportunity is something possessing extreme interest, perhaps connected with romance, and a privilege awarded to a fortunate few and looked on as an incentive to stint and save for a period of years that their realization may be accomplished. This is largely true in spite of the fact that many experienced travelers contend that the best part of a pleasure trip is the arrival home. However, after several years of knocking about under army orders, the starch is taken out of the word romance, and there looms up a vision of home life and a permanent civilian practice. It is not likely that we will ever again have as many moves as in the past; for the tendency is to abandon the smaller posts, and more dentists every year are added to fill the corps to its authorized strength of one dentist to each thousand of enlisted men.

Officers' quarters built in recent years are excellent—modern in all respects, with ample room for a man with a family. Other houses of the older type are poor, generally old-fashioned, and even depending on stoves for heating purposes, although practically all have modern plumbing. They are furnished with articles of heavy furniture. This is for the purpose of economy in shipping when officers are changed from one station to another. Certain quarters with housekeeping facilities are designated as "married quarters." Bachelors are usually assigned quarters in the bachelor building, which is divided into suites of two rooms

and a bath. They take their meals at the officers' mess. A big item allowed to all officers is heat and light. Telephones are installed by the Army Signal Corps in all houses. Repairs to the quarters are made by the government without expense to the occupant. The garrison prisoners are kept employed a portion of their time caring for lawns, shrubbery, gardens, and in handling wood and coal. An enlisted man may be and is usually engaged at $5 per month as a "striker," or man servant. The work is entirely optional with the man, and must not interfere with his military duties.

Nearly all staple groceries are carried in stock at the Commissary, and officers are privileged to buy their subsistence supplies there. The articles carried in stock are much cheaper than at any of the retail grocery stores. At the clothing storehouse is wearing apparel of excellent quality and very serviceable, but mostly of a coarse texture. It is primarily for issue to the enlisted men; but officers are allowed to make purchases at contract prices.

The army dental surgeon does not have the independence of the civilian practitioner. We are not allowed to leave our office during office-hours, from 9 A. M. to 4 P. M., without permission from the commanding officer, or post surgeon. After 4 o'clock, we may leave the post by registering out at the headquarters building, stating the time of departure, destination, and probable time to return. However, a reasonable request to be absent from the post a few hours is almost always granted. Post leaves up to ten days are quite easily procured. The time taken on short leaves of absence is deducted from the allowance of one month a year.

In the military service, financial status counts for naught; rank is everything. Officers of the Dental Corps have no promotion. They all have the rank of first lieutenant; yet the law creating our corps states that we do not take rank with the first lieutenants according to the dates of our commissions—that is, we remain at the foot of that grade, ranking only the second lieutenants. This is not a hardship the first few years; but as we become older in years and service, and the officers, formerly junior to us, jump over our heads, perhaps ranking us out of quarters, we naturally desire Congressional action to provide more liberal legislation. Promotion requiring previous study and a subsequent examination not only will increase the efficiency of our corps, encouraging a feeling of *esprit de corps*, but will afford a direct benefit to the service. Some time in the not too distant future, a law is certain to be created elevating our present condition. If for no other reason, the issue will be automatically forced on Congress; for the rapid advance of our profession to a higher plane will continue at even a greater pace, and legislation will be cheerfully given.

We have every reason to believe that our social status is on a par with other officers of equal rank, both in the army and in civilian circles. In all probability, we are more favored in this respect than the average of other dentists; though, much depends on the individual, as to his leanings and tastes for social diversion.

A compution of all items that should be considered in accounting our lot with that of our civilian brothers is as follows:

Salary, officer with 15 years' service	$2,600.00
Average outside practice	720.00
Retirement on three fourths pay or $2,100 after thirty years' service requires a regular saving of about $40 per month, interest compounded annually	480.00
Office rent at $40 per month	480.00
House rent at $40 per month	480.00
Attendant at $30 per month	360.00
Supplies, instruments, appliances, replacements	300.00
Leave of absence for one month on full pay	216.67
Depreciation of equipment at the rate of 10%	200.00
Heat and light for quarters at $12 per month	144.00
Interest at 6% on office equipment valued at $2,000	120.00
Telephones, quarters, and office at $7.50 per month	90.00
Commissary privilege, $5 per month	60.00
Total	$6,250.67

Another item of possible cash value is expense incurred by sickness, either temporary or prolonged enough to render an officer unfit for further military usefulness. Not only does our pay continue, but we have no medical or hospital bills to meet. If incapacitated for further work by sickness or injury contracted in line of duty, we are retired on three-fourths pay.

An Acting Dental Surgeon's pay is $1,800. After three years when commissioned as a first lieutenant, the initial pay of the grade is received, or $2,000. In two more years, or a total of five years' service, the first "fogy" or a ten per cent. increase is received, making the salary $2,200. The pay is advanced ten per cent. every five years thereafter, up to twenty years. None in the Dental Corps have served long enough to receive $2,600 except some now in the Philippine Islands or Alaska, where officers are paid an additional ten per cent. This amount is merely taken as an average for thirty years' service. Requests by officers for retirement after thirty years have been granted heretofore; but it is impossible to foretell just what action future presidents will take, particularly with members of the Dental Corps, who are not subject to a rigorous field duty. The regulation that officers may retire at their own request after forty years' service will probably continue to stand, as also will the compulsory retirement for age at sixty-four.

The statement of the army dental surgeon's income may indicate that a considerable saving may be effected from year to year; but this is not true. Social duties of almost a compulsory nature exact a certain amount

of our income; frequent changes of station, for married officers in particular, means a loss of money, even though we are paid seven cents a mile in traveling under orders; the initial outlay for uniforms, equipment, and replenishment is quite a factor, not taking into account the complete outfit of civilians clothes; furthermore, to obtain the respect of his fellow officers and the enlisted men in particular, an officer is obliged to live as an "officer and a gentleman."

The original appointments to the Army Dental Corps are as Acting Dental Surgeons. If their services have proved satisfactory to the Surgeon General after three years, they are eligible for appointment as Dental Surgeons, and are permitted to take an examination for this promotion. If successful, they are commissioned as first lieutenants in the Dental Corps. It is difficult to define the status of an Acting Dental Surgeon. Needless to say, it is of a quasi-military nature. They are really civilians, although a uniform without the shoulder straps is worn, the respect of the enlisted men is given the same as the officers, and practically all allowances are authorized, except retirement in case of disability.

The opinion seems to be current that the army dentists live a life of ease as far as their professional work is concerned. Decidedly, this is not the case. Although our hours are not long, we are continually rushed until the end of the day, and our appointment books are filled for several weeks ahead. Totaling the number of officers and enlisted men, their wives and families, and civilian employees who are entitled to dental treatment, there are about 1,800 persons to each dental surgeon. Ninety per cent. of this number should have attention at least once every year. A busy civilian dentist will care for about 200 different patients during the same period. The general practitioner usually refers cases of oral surgery, fractures, orthodontia, and sometimes extracting and pyorrhea to the specialist. With the exception of orthodontia, we are expected, and are called on, to perform this work. Our practice is not generally of the more nerve-racking kind, with its accompaniment of early-day fatigue. We treat comparatively few women and children; the officers and enlisted men are necessarily physically fit—physical cowards without the strength of will-power for self-control are found, but fortunately the neurasthenics are quite absent; enlisted men are not allowed personal or friendly conversations with officers—no family histories to take up time; chiefly through fear of reprimand or punishment, appointments are kept with precision.

The supplies, equipment, and furniture in the dental offices of the different posts are generally of the best manufacture, but they are for service and not for show. The larger posts, designated as base stations

have the more elaborate outfits. Each office, also has a field outfit for the dental surgeon's use when ordered to the smaller posts on temporary duty. It consists of a field desk, two instrument chests with contents to perform all work except that of making plates, portable chair and foot engine. The instrument chests are conveniently arranged to be used as cabinets when opened. The government is quite liberal with the necessary supplies that are listed in the supply table, and there is never any cause to run short, provided timely requisitions are made. We are prohibited by army regulations to use precious metals in treating the teeth of enlisted men, either during or after hours, except outside of the geographical limits of the United States. Officers and their wives and families are entitled to this work. They pay for the cost of the material used. It is furnished by the dental surgeon. Our work then is largely limited to the use of amalgam, cement, and porcelain crowns. For partial edentulous jaws, vulcanite plates are made in lieu of bridge work. Before or after hours, we may operate for civilians, giving the emergency cases arising in the army the preference.

In organizing the Dental Corps in 1901, the Medical Department was fortunate in securing the services of a man of proper calibre, as chairman of the examining board. This man, Dr. John Sayre Marshall, "Father of the Dental Corps," set an excellent standard, which should be inviolably maintained as a guide to the younger men now carrying on this work. All details pertaining to the examination of applicants, allowances, requirements, et cetera, may be obtained by writing to the Surgeon General of the Army, Washington, D. C., or by consulting the Manual of the Medical Department or Army Regulations. Both these books are furnished to all military posts, recruiting stations, and National Guard headquarters. The examination is thorough, but fair. The Corps is short a number of men, and it is very much desired that candidates qualify.

VANCOUVER BARRACKS.

Haroun al Raschid—"What kind of a language are those two old fellows speaking? I can't make out a word they say."

Grand Vizier—"O Commander of the Faithful! Those two patriarchs have lost all their teeth and are speaking gum Arabic."—*Western Dental Journal.*

A SIMPLE AND EFFICIENT INTER-DENTAL SPLINT

By Will S. Kelly, D.D.S., Wilkes-Barre, Pa.

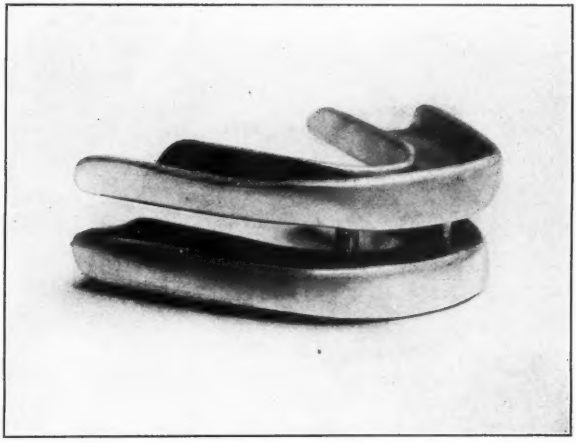
I have been treating fractures of the lower jaw for many years. I never had a case of superior fracture, that required a special appliance, but have had very serious and complicated cases of inferior fracture. Wiring has been abandoned by the best surgeons, principally because its use is frequently followed by infection and necrosis.

The stereotyped vulcanite splint is inaccurate, the relation of the angles being all guess work; it is also very hard to keep clean, as the pockets are always filled with fermentive secretions of the mouth. The Barton bandage is an uncertain quantity, as it will surely stretch, allowing displacement of the fragments and it is bad policy to have the teeth strapped together with no ventilation. It is unsanitary, as it is impossible to cleanse the mouth, and in many instances teeth must be extracted to make room for a feeding tube. Should a patient cough, or sneeze or vomit, he is in a distressing position, and occasionally the bandage must be hurriedly cut or torn off. Then the fragments again separate.

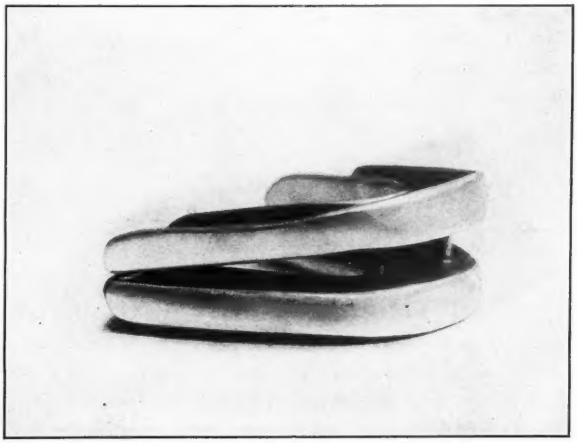
Now, as to the birth of my splint. A patient, whose condition is described in Doctor Wagner's letter, given later, was taken to Mercy Hospital in my town (Wilkes-Barre) and after some experimenting, I was called, to see whether anything could be done. It was a forbidding looking case. The man's head was as large as a big pie pumpkin, and naturally the flesh was about as hard. I took an impression, as well as possible, and made the regulation vulcanite splint, which was difficult to place, and unsatisfactory to me from the start. The next morning the nurses removed the bandage, to dress the horrible wounds on the face, and the fragments of the jaw fell apart. One gash, which opened up into the mouth, ran from the ear lobe to the chin, and was $4\frac{3}{4}$ inches in length. It cut through all muscles, breaking the jaw into fragments, nearly across the mouth. There were two fractures in the ramus, one at the angle, and the others distributed irregularly to the symphysis, where was located the last fracture. I knew that if we were unable to hold the fragments in positive position, without bandaging, the man was "up against it."

After some study, I cut down two lower impression trays, and fastened them together with flexible posts at the cuspid angles. These made the splint. I fastened them at the heels with solder, but I afterward learned that it was better not to fasten them at the heels, owing to the necessity of adjustment to obtain the best results. I then took some modelling com

pound, softened it as for an impression, and filled the trays, placed the appliance in the mouth and pushed it up, until the upper teeth bit through the compound to the plate. I then manipulated the fragments of the



As you place the appliance in mouth for adjusting bite. Open at heel



After the adjusting bite has been made. Heels closed to natural angles of jaw

fractured jaw rapidly, until they were in proper apposition and pressed the whole lower jaw up firmly but gently, into the lower tray, until I felt the teeth or a tooth touch the metal. I held it for a few minutes until the compound was well hardened. That held the lower jaw suspended to the upper. For five weeks I left it in place, without the aid of ban-

dages. When I removed it, no one would have suspected that the jaw had been fractured. The articulation was perfect. That was nearly six years ago, and I have used that method a number of times since.

Copy of Dr. Wagner's letter

John Cavanaugh, miner, was injured by a premature blast. One side of his face was almost blown off, and the lower jaw fractured in fourteen different places. Every appliance known to modern surgery was used without avail, owing to the fact that the face required daily irrigations and dressings. One of Doctor Kelly's Interdental splints was introduced into proper position, in about twenty minutes, suspending the lower jaw to the upper, without the aid of bandages. This splint was left in place for about five weeks, and upon its removal, articulation was found to be perfect.

E. C. WAGNER, M.D.

One young man was sent to me by his physician, with a clean fracture between the second and third molars. I placed a splint in his mouth without a bandage, and he went to work, and worked every day, coming three times a week to allow me to spray the mouth. I removed the splint in four weeks.

The last case I treated had three fractures. One in the ramus and one on each side between the second bicuspids and first molars. He was treated in hospital four days, and then brought to me by Doctor Lenahan, whose letter accompanies this article. Two weeks later the patient went to hospital, and had X-ray photo taken, which I also enclose. The splint remained in place four weeks.

Copy of Dr. Lenahan's letter

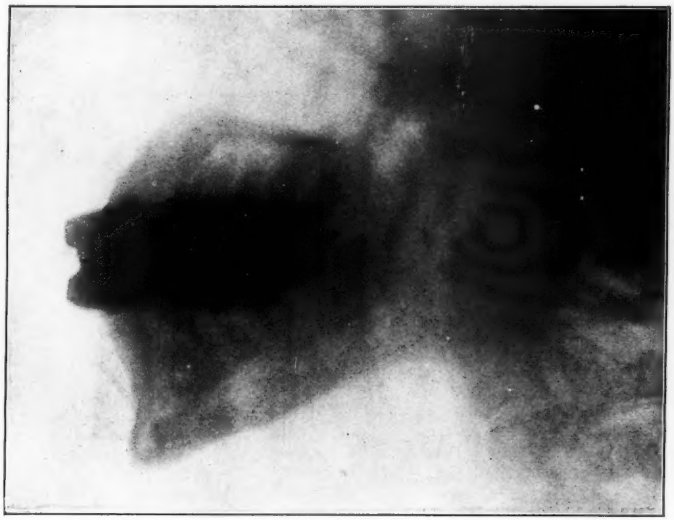
TO WHOM IT MAY CONCERN:

I have used Dr. Will S. Kelly's splint, in a case of multiple fracture of the lower jaw, with entire satisfaction. Not only was an excellent result obtained, but the patient was more comfortable, and could more easily take liquid nourishment, than would be possible with any other plan of treatment used by me, during my twenty-seven years of surgical experience.

F. P. LENAHAN, M.D.

I am now making the splints in three sizes, which I term a "set." I can hardly conceive of a case, where one of these sizes would not be suitable. The brittania of which they are made, is non-corrosive, and a non-irritant. They can be sterilized, and used repeatedly, as they are

practically indestructible. When a patient is presented, you first decide which size you must use. The safest plan is to slide one in the mouth as a test. You will note that the upper half protrudes slightly beyond the lower. Should the patient have an over prominent lower jaw, the splint may be inverted. After you have determined which splint you should use, place it in the mouth, with extreme rear ends separated as far as the plates are in front. Get the fragments of lower jaw in proper position with both hands, and by pressure, assist patient to bite up hard. That will close the spaces at heel, until they are at the natural angle of the jaws. Then remove, fill the trays with the softened compound, dry the



X-ray of patient who had three fractures, one in the ramus and one on each side, between the second bicuspids and first molars

teeth as well as possible with cotton or a towel, push splint into position, as I have heretofore described. Hold firmly until compound is hard, when you can safely dismiss patient.

The space between the trays, held by posts, is for ventilation, irrigating and feeding purposes. Liquid can easily be taken from a cup without effort. Coughing and sneezing does not distress. In removing, place finger tips at top edge, working downward, first on one side, and then the other, until upper tray is detached from the teeth. Then do likewise with lower.

After removal it is well to paint gums with equal parts tincture iodine and glycerine. That is a thorough antiseptic, and will not burn the gums. I always use that mixture following scaling and polishing of teeth

and it prevents possible infection, from dragging the brush through one disease pocket to another part of mouth.

With this splint, there can be no failures, providing you properly manipulate the compound. As it hardens rapidly, work must be done with considerable dispatch.

This splint was born, not from skill or brain, but to save a man's life, and where instinct was the master.

THE PANAMA PACIFIC DENTAL CONGRESS SAN FRANCISCO, CALIFORNIA

AUGUST 30TH TO SEPTEMBER 9TH, 1915

The members of the TRANSPORTATION COMMITTEE of the National Dental Association, adopted three official railway routes and schedules to San Francisco from the East, and are now engaged in calling the attention of the profession to the schedules planned. Members of the committee are located in different sections of the states, and are prepared to give members of the profession in their localities, general information regarding the railway routes, fares, etc.

The Railway Itinerary of the official trains as published in the March number of the Dental Digest, Page 202, should be examined carefully by all that are intending to make the trip, as the plan adopted in employing our special and official trains is to encourage comfort in transit and general good fellowship.

The committee suggests that one should confer with their local railway agent, or one referred to in our itineraries, and choose a route for their return trip, which is necessary before purchasing a reduced fare ticket.

TRANSPORTATION COMMITTEE NATIONAL DENTAL ASS'N.

DR. VICTOR H. JACKSON, (Chairman) 40 E. 41st St., N. Y.
DR. H. F. HOFFMAN, 324 Metropolitan Bldg., Denver, Colo.
DR. JOS. D. EBY, 509 Fourth National Bk. Bldg., Atlanta, Ga.
DR. D. C. BACON, Columbus Memorial Bldg., Chicago, Ill.
DR. HENRY W. WEIRICK, 503 Mechanics Bldg., San Francisco, Cal.
DR. J. P. MARSHALL, 7401 Hazel Ave., St. Louis, Mo.

MASTICATING EFFICIENCY IN NATURAL AND ARTIFICIAL TEETH*

By Alfred Gysi, D.D.S., Zurich. Switzerland
Professor at the Dental School of the University of Zurich
AND
George Wood Clapp, D.D.S., New York

ARTICLE VI

Editorial Note.—I have changed the signature to some of these articles. In the previous articles, I put my own name as assisting in the writing. In this case I have placed it as contributing to the article, in order that Dr. Gysi may not be made responsible for all the revolutionary statements to be made in this portion of the series. These, once properly understood, will go far toward changing our entire notion of articulation in all prosthetic cases.

When Dr. Gysi was in America he taught me these theories of the functions of the cuspids during mastication. They seemed important then, and their importance has been growing on me. I have improved opportunities to study the functions of what I call "the cuspid region" ever since, and I believe that Dr. Gysi's theories are fully justified, and that the matter is worthy of much fuller explanation and greater emphasis than it has received. I have therefore, entirely reconstructed the article, seeking to incorporate the views Dr. Gysi expressed and adding the fruits of my own studies through some years.

I believe the statements here made to be capable of satisfactory proof by any dentist. But, in order that no blame for any statement which is subject to future correction may be attributed to Dr. Gysi, to whom I have been unable to send the article, I have changed the form of the signature and take this method of assuming the responsibility.—George Wood Clapp.

THE FORMS AND FUNCTIONS OF THE CUSPIDS

It may not be exact to say that one group of natural teeth is more important than another, since the work of each is necessary to mastication. But bicuspids and molars will not be able to function efficiently unless the cuspids absorb the shock of the closure of the jaws, guide the closing teeth into correct relations and act as the fulcrums for the exercise of the force by which the food is crushed. The influence of the cuspids thus extends so far beyond their duties as keystones of dental arches, and as fibre holders, as to render these duties comparatively insignificant. The chief duties of the natural cuspids are as shock absorbers, guides of the closing movement and fulcrums for the exercise of muscular power.

THE CUSPIDS AS SHOCK ABSORBERS

If we study the movement of the jaw from the instant it begins to open to take food between the bicuspids and molars until it completes

the "masticatory cycle" by returning to the position of rest, we see that the movement may be divided into four fairly well defined parts, as diagrammatically shown in Fig. No. 41.

There is no known record of the force with which the jaws come together in the first impact, but it must be considerable, as one learns

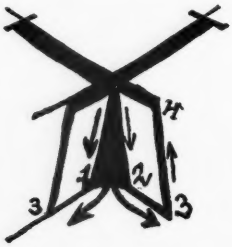


Fig. 41. Diagram of the Masticatory Cycle. When opening to take food between the bicuspids and molars, the jaw moves downward and a little sideways to 2 and then strongly sideways and a little downward to 3. On the return movement it moves upward and a little inward until the cuspids come into lateral occlusion at 4. It then moves strongly inward and a little upward, with the teeth in contact until it comes to rest in central occlusion. We have called the completed movement "the masticatory cycle."

Fig. 42. Closure of the Jaws. This illustration shows the manner of closure of the jaws in lateral occlusion for the beginning of the triturating movement. It will be noticed that the cuspids are in occlusion. "From Science and Practice of Dental Surgery.—Bennett."

when a tooth is sore to touch. Probably the pressure at the cuspid region increases during the progress of the masticatory movement. When the number of repetitions of this movement per day is taken into consideration, it is seen that the cuspids must absorb several tons of shock each 24 hours. It is quite probable that the strong roots and

crowns and strong implantations of the cuspids are in part designed for the discharge of this function.

THE MANNER OF CLOSURE OF THE JAWS

When the upper and lower teeth come into contact in lateral occlusion they occlude first at the cuspids, as shown in Fig. No. 42.

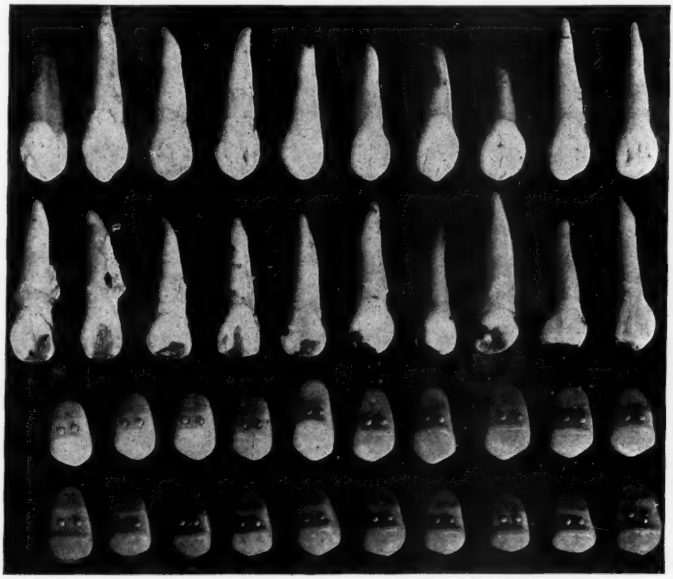


Fig. 43. Different natural cuspids show wear on widely separated portions of the crowns, due to different positions of the worn teeth and the opposing teeth in the arches. This illustration shows natural and artificial cuspids as follows:

Upper row: Lingual surfaces of unworn upper right and left natural cuspids. Note the long, sharp cusps.

Second row: Lingual surfaces of upper right and left natural cuspids worn by occlusion. The worn areas are blackened to make them conspicuous. The wear on the teeth here shown is entirely on the mesial. It will be noted that the wear has generally removed the tip of the cusp, and has reformed the tooth with the tip farther to the distal.

Third row: Lingual surfaces of upper right and left artificial cuspids of the forms common before Trubyte teeth. It will be seen that the tip of each tooth is well to the mesial, which conforms to newly erupted cuspids rather than to teeth worn by articulation. These cuspids cannot be properly articulated in artificial dentures without extensive grinding.

Fourth row: Lingual surfaces of upper right and left Trubyte cuspids. The form of the articulating edges is much more like that of the worn natural teeth, with the tip nearer the distal surface. These teeth are correctly formed to secure right occlusion and articulation in artificial dentures.

The pressure is then wholly at the cuspids. The bicuspids and molars are out of occlusion and will come into occlusion only as the triturating movement is continued toward completion.

You can confirm these statements if your own teeth are all present and in correct positions. Throw the jaw into lateral occlusion, with the buccal ridges of the lower teeth directly below the upper buccal ridges of the uppers. You will feel pressure only at the cuspids. There will be no sense of contact at the bicuspids and molars, and no sense of pressure at the location of either condyle. You will probably be unable to

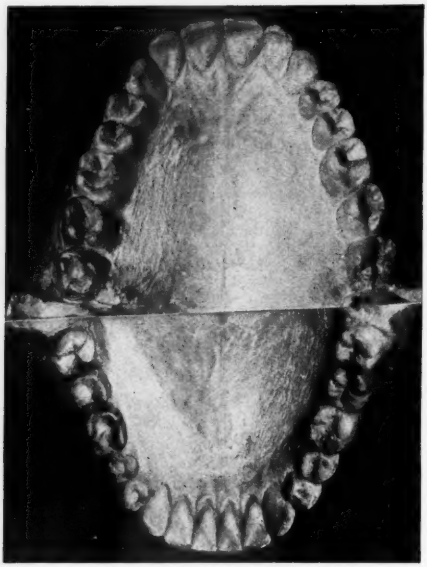


Fig. 44. Two views of a nearly perfect set of natural teeth. These illustrations are used by the courtesy of Dr. E. A. Bogue who states that this set of teeth is the most perfect he has seen in a long life spent in practice. One view shows the teeth occluded (See Fig. 45, page 435) and the other view shows the articulating surfaces of the cuspids which are worn in exactly the form advocated by Prof. Gysi for artificial cuspids.

press hard enough on the teeth in this position to bring the bicuspids or molars into contact. As the jaw moves toward the centre, the buccal cusps of the bicuspids will come into contact and then the molars.

SHOCK ABSORBING BY PORCELAIN CUSPIDS

The application of this fact to the construction of bridges and artificial dentures will suggest itself to mind. If the teeth strike first in the cuspid region, instead of at the molars or all along either side, and if this contact must absorb the shock of closure, it becomes of prime importance

to so arrange the teeth in bridges or artificial dentures involving the cuspids that the abutments shall not be knocked out of place or the dentures dislodged by this form of contact. That brings us immediately to a consideration of the forms of cuspids which can be arranged for proper occlusion.

THE FORMS AND POSITIONS OF NATURAL CUSPIDS

When natural cuspids erupt, they usually present long cusps and are so placed in the jaws that the uppers often deeply overhang the lowers. The frequent lateral movements of the jaw with the repeated heavy

FIG. 45

contact soon wear the tips of the cuspids to articulating forms. The amount of wear differs greatly according to the location of the cuspids in the arch, the presence or absence of the posterior teeth, and the masticating habits of the person. It is often extensive by the age of 40 or 45. Fig. No. 43, page 433, shows a few natural cuspids on which the area of wear has been blackened.

Lower cuspids are usually found to have been modified by the wearing away of the tips of the cusps and the moving of each tip mesially from its location when it erupted. The result is that the upper cuspids present long mesial inclines, and the upper and lower inclines occlude together to absorb the shock of occlusion.

ADAPTATIONS FOR PROSTHETIC PURPOSES

The successful prosthetist is not a slavish imitator of nature but rather an engineer adapting his restorations to act under different conditions than those surrounding healthy natural teeth in healthy gums.

If he is making a bridge, each abutment is doing more than its intended duty. If he is mounting a crown the root is probably filled and must be protected from breaking strains. If he is making artificial dentures, they must be made to support each other in position while they function. His success will be measured by the skill with which he adapts nature's engineering principles.

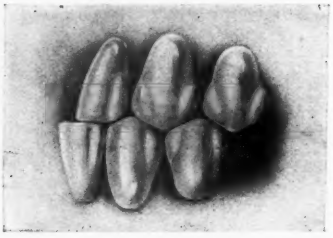


Fig. 45. Proper relations of upper and lower cuspids in articulation

The maker of artificial dentures will reap great advantages if he employs an arrangement of the cuspids which is an engineering adaptation of that usually seen in natural dentures. It is to arrange each lower cuspid so that its labial margin will occlude with the lingual margin of the upper cuspid, and in lateral movements of the jaw with the teeth in contact, the distal facet of the lower cuspid will maintain contact with the mesial facet on the upper cuspid.

The advantages gained in this way are that the cuspids are never out of contact when the teeth are together. In order to secure this arrangement, the dentist is compelled to so place the cuspids as **to insure contacts which will support the dentures in position and avoid all contact which will dislodge the dentures.** He removes the strain from the lower and upper laterals where it is likely to occur unless he definitely places it on the cuspids, and he conforms the teeth to the movements of the jaw which nature will insist on, even at the cost of dislodging his dentures or breaking the teeth.

(*This article is expected to be continued in the August number.*)

CORRESPONDENCE

Editor DENTAL DIGEST:

I notice in your DENTAL DIGEST that you have a question department (which, by the way, ought to be in every dental journal); I therefore, take the opportunity to refer the following question to you or to your readers, as I am very anxious to have advice in this matter.

I have noticed a couple of times having inserted a gold crown on a devitalized tooth which I have treated and filled, and instead of cementing it on with oxyphosphate, I inserted gutta-percha. Everything was well; the patient felt comfortable, but as soon as I cemented it on with oxyphosphate the patient felt pain on taking anything hot. In all these cases nothing was removed or changed in the tooth, the only change being that of the cement instead of gutta-percha. I have asked several practitioners and they answered that there must have been left some nerve filaments, and if such is the case why did it not pain when with the gutta-percha.

Truly yours,

D. F.

May 17, 1915.

Editor DENTAL DIGEST:

I have read a number of articles at different times in the DIGEST written by men who wanted to get a load off their minds, and I am taking this opportunity to get some ideas about the thing that bothers me.

We, as dentists, wish to consider ourselves and be considered as professional men and place dentistry on an equal plane with medicine, yet every day we blindly do a thing that is contrary to professionalism and good sense, and that is devitalizing teeth with arsenic by our present method.

It seems to be a subject that dentists don't care to discuss. If you ask them the method they employ and the result they have, the answer is nearly along the same. "I use So and So's preparation and never have any trouble. But when you talk with your patients who have had teeth devitalized they tell a different story, one we all know by heart.

I have tried nearly all the preparations I have seen advertised and followed instructions absolutely thinking that some time I might find something that would devitalize and work the same on every tooth in which it was used. When you stop and think that is a foolish thing to expect on the face of it.

Different teeth present different pathological conditions yet we treat them all alike, use the same preparation on all of them and expect uniform results.

Occasionally we find a pulp that dies quickly and the patient experiences no pain, while the same preparation in another tooth will cause it to ache for a week and not be dead enough to remove without pain for two months. Isn't there some help for this? Can't some of the men in our profession find a way to diagnose the condition existing in each tooth and treat it accordingly? Treat professionally and with an understanding, not blindly?

Until we can do that we are not professionally equal to a physician. I would like to hear some other thoughts along this line.

R. C. V. OSTEN,
Plano, Ill.

A WORD TO "CAROLINA"

Editor DENTAL DIGEST:

I want to say a word in reply to "Carolina" in May issue of the DIGEST. I will say to start with that he is missing one of the best opportunities to turn off his least desirable work to his competitor that a man ever had. I went up against the same thing once and I started out from the very first day to be too busy to work for "some people" and that was when I really needed the money most too. In a short time I had turned my competitor so much of the undesirable class that the best people had to come to me to get waited upon at all.

This may or may not be a good way for "Carolina" to treat his competitor but if he can deliver the goods and will have sense to charge enough for superior service he will win out. If, however, he cannot do better work than the man who apparently makes money out of such ridiculous fees, he had better quit practice and go to doing something. As for myself, at the fees he names, I would make a rough guess that I would come out in the hole about several thousand dollars every year, or in the words of the grocer that was selling staple goods such as flour, sugar, etc., for less than wholesale cost, when asked by one of his competitors how he could do it, he replied that he couldn't afford it if it were not for the fact that he sold so much of it. Again if "Carolina" is really competent to deliver the goods and his location positively refuses to have good dentistry at a living fee for the dentist, let him move to some other place and give the new location the benefit of that superior service.

Yours truly,

C. B. A.

The itinerary published in THE DENTAL DIGEST for March is that adopted by the Transportation Committee of the National Dental Association

THE FUNCTION OF THE ANTRUM OF HIGHMORE

Editor DENTAL DIGEST:

Permit me to express my opinion as to the function of the antrum of Highmore.

One idea is that the antrum reduces the weight of the bone, while according to Doctor Barrett, it tends to help the sound of the voice; I believe, however, that its function is purely mechanical, *i. e.*, that it serves to protect the orbital and nasal cavities against the constant pounding of the lower jaw during mastication, especially the molar teeth against the upper.

As we know, the antrum is triangular in shape, one side being formed by the floor of the orbit, one by the nasal cavity and the third by the alveolar processes of the upper teeth from cuspid to second molar, inclusive. We also know that the teeth are imbedded in the alveolar processes and held by the pericemental membrane, being movable, and as the mastication is done by the cuspids, bicuspids and molars, there is a pressure of from 75 to 125 pounds during mastication, the lower jaw, so to speak, acting as a hammer against the upper teeth. If we had solid bone the shock produced in the upper teeth during the process of mastication would be transmitted immediately to the area of the orbital and nasal cavities, causing much disturbance, but the antrum being an open air chamber distributes the shock so as not to produce any disturbance in the orbit or nasal cavities.

Respectfully submitted,

A. K. KARAMANOS, D. D. S.,
Chicago Ill.

Editor DENTAL DIGEST:

Kindly give me replies to the following questions or submit same to your readers.

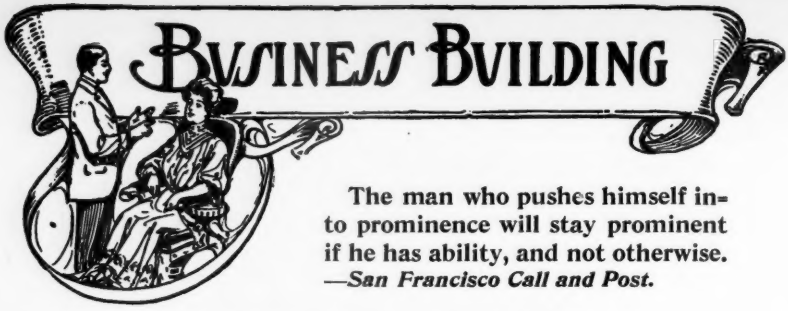
1. Is it permissible to use amalgam under a gold crown, or will the mercury disintegrate the gold?

2. What would be the method of dividing the roots of a lower molar, after a failure to extract same entire? Would not the splitting forceps endanger the jaw bone?

3. Is it permissible to leave a root under a bridge, if the root is healthy and filled flush with the ridge?

Yours truly,

M. A. K.



The man who pushes himself into prominence will stay prominent if he has ability, and not otherwise.
—San Francisco Call and Post.

HOW I HELPED MY HUSBAND

By a Dentist's Wife

Five years ago Fred and I were married. He was a dentist then who had been out of college two years and in that short time had worked up a very good practice. In college work he was brighter than the average, finishing fourth in a class of one hundred and forty-four. But as I told him afterward he was a professional man first and a business man afterward, and, I might add, a very poor business man.

After a short honeymoon we rented a small cottage and settled down to the regular routine of life. Fred's practice amounted to nearly three thousand dollars a year in cash receipts which sounded larger than it really was. Three thousand to a dentist is much less than three thousand in a straight salary because every dentist has an office expense which amounts to considerable.

My father was a dentist, too, but one of the old school who got his experience by hard knocks. He conducted his practice on a business basis and as I acted in the capacity of his secretary he gave me an excellent training in the financial end of dentistry. He admired Fred, especially his ability as a dentist, but he said to me one night before our marriage:

"Margaret, you will have to teach Fred the business end of dentistry because I do not believe he conducts his practice with such system as we have used all these years."

I replied that I would help him in any way I could, and when we got stuck and needed advice we could always go to Dad for it.

"Well, Fred, you are very quiet to-night. What's on your mind?"

He answered in his own good natured way:

"I don't know what is the matter with my practice. I seem to take in enough money to keep us going comfortably and yet we are always hard up."

That was the entering wedge to our real partnership. After dinner was over and the dishes were washed (I had no maid and Fred always

wiped the dishes for me in the evening) we went into the sitting room to talk things over. I asked Fred what it cost him to run his office. He replied:

"About seven or eight hundred a year, I guess, but I never figured it up."

At my suggestion we walked over to the office and got all the books and carried them home. We went through the check book first to get the office expense. Fred called them off and I jotted down each item and what it was for. To our surprise the total came to twelve hundred and eight dollars and eighteen cents.

The rent for the house came to $240, telephone $18, groceries $238, laundry $38, ice $15, fuel (coal and wood) $64, scrub woman $52, clothes $322, life insurance $155.65, fire insurance $12, lodge dues $5, church $25, incidentals $47, making a total of $1,229.65 and a grand total of $2,437.72.

"According to that," Fred went on in a surprised way, "we ought to have nearly five hundred dollars in the bank but we have nearer one hundred than five hundred."

"Fred dear," I replied, "hereafter I am to be your business partner. You keep track of everything you take in and pay out at the office and I will do the same at the house. I'll keep a complete set of books for both places and be your secretary."

Fred thought that would be fine and so we started the new year in the new way. Every Saturday evening from eight till nine there was to be a business meeting for the purpose of hearing suggestions and talking things over. Nothing was to be allowed to interfere with that meeting.

Our first meeting lasted from eight till long after ten. Fred was buying his dental supplies by mail in small quantities and paying for them in thirty or sixty days and getting no discount. I asked him if there was no discount from the dental supply houses he dealt with and he said:

"Yes—if you deposit $95 they will give you credit for one hundred and fill your orders to that amount as they come in from time to time."

"Well," I said, "from now on we are going to get that discount because it means a saving of practically $30 a year."

So Fred paid up a small back account and sent in his first deposit and that was a good start on our "system." Then we went over Fred's price list of fees for dental services. I knew my father's fees intimately and they were all figured out scientifically. Fred was charging the same for treating an abscessed tooth that he would charge for a service requiring half the time and work. I told him I thought that was wrong and he agreed with me.

So we revised the list basing each fee as best we could on the time consumed and the service rendered. Some things which seemed small in

a way Fred was doing gratis so we placed them all in the fee list. No self-respecting patient will call for a professional man's time and expect it for nothing.

We went over the books and found too much credit was being extended in a loose way. We put that on a business basis. Those who were not known or whose reputation for paying was below par would hereafter have to pay a deposit before the work was started and the balance before the work was completed, always keeping on the safe side. Each month I sent out statements which I had printed with this little phrase in italics at the bottom—"Your credit in any community is based on the attention paid your bills when due."

The scrap gold such as filings, shavings, old crowns, etc., were watched closely and turned in for a credit slip. As this amounted to nearly sixty dollars a year it was an item worth consideration. Fred was careless in letting a great part of it escape but I showed him where he must economize in order to get the most out of his practice.

Every Saturday evening was looked forward to by the both of us. We took a keen delight in seeing how our system would work out. I showed Dad our new price list and he said we had made a start in the right direction. Some of Fred's slow patients dropped off his list but better ones came to take their places and they were not missed. The cash book took an immediate brace and I could see the books show a healthy increase from month to month.

At the end of the first year we had a balance in the bank of over fourteen hundred dollars so we bought a lot, got a loan from the loan company and built a bungalow. The contract on the loan was drawn up in such a way that we could pay off the balance remaining at any time we cared to.

To-day after a little over four years under the new "system" we have paid off our loan and own our home free from incumbrance. We bought and paid for a lot across the street. We have a thousand dollars invested in a six per cent. mortgage bond. We own a gasoline motor boat which we enjoy all summer and we have a reserve in the bank of over seven hundred dollars. Next year, if all goes well, we will have an automobile but we decided not to get one until we could really afford it and then it would be a good one. That is only a start of course but as Dad says, it is a start in the right direction.

Two babies have come to cheer the way but I have never let them interfere with the business management of Fred's practice. We have a maid in the house and I am relieved of many of the smaller duties. We are all happy. Fred is especially ambitious and as he says, "full of pepper." He has a cheerfulness that is infectious and we are never so happy as when he is with us.

The night he brought the thousand dollar bond home he took me in his arms:

"Margaret," he declared admiringly, "you are the best little wife a man ever had. Everything we owe to you. You have been the business partner with a vengeance."

Appreciation is one thing Fred never lacks. When I cook a dainty dish he sees it first and admires it. When I put on a new dress or hat he always tells me how he likes it without my asking him. So it was perfectly natural that he should give me credit for putting us on our feet and on the road to independence. I wonder if there is in the world a single woman who does not appreciate an occasional word of praise.

I am vain enough to feel that I have carried out Dad's advice and have done my part.

MARGARET HELPUP.

FINANCIAL INVESTMENTS*

BY PERCY A. ASH, D.D.S.

PRELIMINARY

Lest I may be considered presumptuous in addressing you upon such a matter as this, I would like to say, for the information of those who do not already know, that before I took up dentistry I spent six years in banking and commercial pursuits and subsequently went through four years' study in law. During the whole of that time my work was largely in connection with the investment of money and the securities over property of all kinds in relation thereto; and the examinations in the various branches which had to be gone through left me in possession of an amount of valuable information which has been of great service.

Before dealing more particularly with the subject of my paper, I should like to make a few remarks regarding the necessity of having a general knowledge of the main principles which govern matters pertaining to financial investments. It is safe to say that the great majority of professional men—especially those who follow such vocations as medicine and dentistry, where the field of operation is so limited and there is no occasion to mingle with men of affairs—understand little or nothing concerning shares in public companies, the methods of calculating interest, the nature of freehold and leasehold mortgages, the difference between securities under the old Act and those under what is known usually as "Torrens Title," the conditions which rule the rise and fall of mining and

*Read in parts before the Odontological Society of N. S. W., the University of Sydney Dental Graduates' Association, and the N. S. W. Society Dental Graduates.

other stocks of uncertain character, and the many other phases of commercial life which must enter into the considerations of the man who has money to invest. It must not be concluded from these remarks that, of necessity, every young student intending to adopt a professional career should first of all spend some years in acquiring sufficient education in commercial affairs. In the strenuous age in which we live, however, there can be no doubt that it is not an easy task to accumulate wealth, and therefore, though philanthropy and self-sacrifice should enter largely into the lives of those who practise the healing art in any of its many forms, still it is incumbent upon us all to make provision for old age. To that end, we should help ourselves by learning and adopting the most advantageous methods of investing money.

At a recent meeting of one of the local societies an accountant read a paper upon "Accounts, and Some Methods of Dealing with Them." In the discussion which followed, a member stated that instruction in that subject should be made a compulsory part of the dental curriculum; and he then proceeded to explain the disadvantages under which he himself labored in consequence of his inability to properly keep his books and thus prevent leakages in his financial affairs. If any practitioner experiences this difficulty—and there must be very many of them—the sensible course to take is to employ a competent and reliable accountant, for it will very soon be discovered that the savings effected through the system introduced by him will overbalance the amount of fees paid for the expert services received. It is a poor policy in all matters to continue upon uncertain ground, rather than expend a few pounds in securing the assistance of those who know. In reply to this, some of you will say that your practice is small and does not permit of the outlay of money to accountants and lawyers, and that you are forced to rely on your own judgment and make the best of the consequences. The line of reasoning is not a good one. Many mercantile firms, even, permanently retain the services of financial advisers of high repute, who exercise a general supervision over the monetary transactions of the business and meet the principals in consultation whenever unusual incidents crop up.

But to return for a moment to the opinion that financial matters should be made a part of the curriculum in dentistry, I say that with the facilities we now have at hand such an innovation is unnecessary and also unwise, seeing that already there is difficulty in crowding into a four-year course all that a fully qualified dental surgeon is expected to know. The "facilities at hand" to which I refer comprise the courses of instruction given at the "business colleges" established in all large cities, and which are open day and night. There one may learn book-keeping, accountancy, auditing, correspondence, and all the other subjects necessary

for the satisfactory managements of his own monetary affairs. The young practitioner will have ample time at his disposal to study these matters, especially in the evenings, and the cost will be reasonable. The dentist who lives inside a tooth, so to speak, will work hard all his life and then probably die in comparative poverty. We are not practising for the good of our health; we are trying to give our patients honest service, but, at the same time, save enough money for ourselves to help us through when our energy begins to fail and a younger generation takes our place. Just now times are bad, and the indications are that they may be very much worse. There can be no denying the fact that many people are finding themselves in great financial straits. This is not to be interpreted to mean that there is not so much money in the country; certainly there is not so much in circulation, due, I think, largely to over-caution on the part of those who have it; also, it is more evenly distributed—the result of the policy of the present socialistic form of government, which is developing all the world over.

. . . . . .

By way of concluding these preliminary remarks, I would like to offer a word of consolation to those who are not doing quite as well as others. In the first place, don't pay any attention to the man who tries to impress you with the amount of money he is making. Most men are tempted to sound their own trumpets a little at times, and we have perhaps as many boasters in our profession as in any other; but it may be taken as correct that any one who voluntarily furnishes information that he is making much greater headway financially than the majority of his fellows, is doing just about one-half what he says, or he would not go out of his way to say it.

It will be of interest to you to know that less than 5 per cent. of all males over the age of twenty-one years clear £1,000* a year; not more than 10 per cent. clear over £500 a year; about 30 per cent. make anywhere from £250 to £500 per annum; and the balance—who comprise more than half the male population over age—make under £250 per annum. These figures may greatly surprise you, but just put them to the test by some practical illustrations. Take one of our largest banks or insurance offices, which employs, say, a thousand hands. Do you suppose that in either of those institutions there are fifty men (5 per cent.) who get £1,000 a year, or 100 men (10 per cent.) who receive £500 a year each? I think not. Apply the test to the whole of the Government service or to a large commercial firm, and the answer will be the same. Enquire into the incomes of the great number on the land, and see whether they will exceed that

*A £1. = $4.86 (Editor Digest)

estimate. While thinking over these figures, bear in mind also that Australia is one of the most prosperous countries in the world; poverty, as it exists elsewhere, is quite unknown here. The fact is, the professional classes do as well on the whole as any other; therefore, let the dentists make the most of the opportunities as they come along, and not forget to learn at the same time how to put by for a rainy day.

In the succeeding papers I shall set out briefly the elementary rules of finance and also a few of the various avenues open for the investment of money, together with some of the conditions and legal aspects relating thereto. In explaining the law upon certain points I shall make extracts from the "Laws of England" by the Lord High Chancellor of Great Britain, and other lawyers.—*The Commonwealth Review.*

(*This article is expected to be continued in the August number*)

SOME FINANCIER

By John Smith, Dealer

This is a man who would do well on Wall Street.

Here is the reason, and if you ever heard of a better Financier, I want to know.

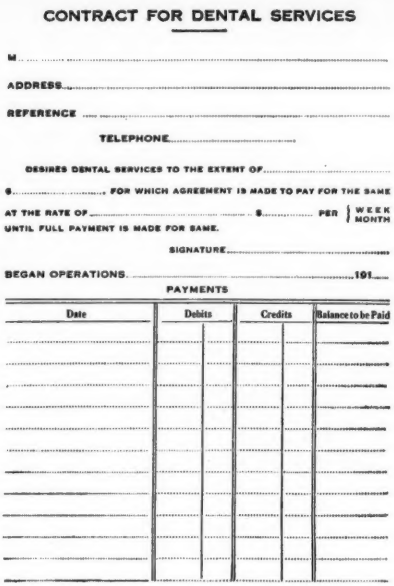
During May this gentleman came in to make a payment on his account for purchases during April and tendered us some Scrap Gold, with which we credited his account.

June first, this same gentleman appeared and wished to buy back his Scrap Gold at the price allowed him and have it charged to him so that the bill would be presented July first.

The April account is still unpaid. Can you beat it?

Method of Casting Occlusal Surfaces of Lower Sanitary Bridge without Investing.—After abutment crowns are made in the usual manner, place a little soft plaster between them and instruct patient to bite. After it has set, remove and trim away excess and carve it as you would have it reproduced; then paint this carving with varnish, and press into soft investment compound. When hard remove and place a nugget of gold in impression and apply blow pipe. When melted quickly press with moldine of common clay and result will be a perfect reproduction of plaster carving in gold in less than half the time of swaging or casting by investing method.—C. O. Fillinger, D.D.S.

A CONTRACT FORM



CONTRACT FOR DENTAL SERVICES

M.....

ADDRESS.....

REFERENCE.....

TELEPHONE.....

DESIRES DENTAL SERVICES TO THE EXTENT OF.....

$.....FOR WHICH AGREEMENT IS MADE TO PAY FOR THE SAME

AT THE RATE OF.....$.....PER { WEEK / MONTH

UNTIL FULL PAYMENT IS MADE FOR SAME.

SIGNATURE.....

BEGAN OPERATIONS.....191....

PAYMENTS

Date	Debits		Credits		Balance to be Paid

Editor DENTAL DIGEST

I have just designed a little Contract Form to enable me without much trouble to myself, to keep track of time payments and running accounts for families, who are unable to pay in full for services when completed. For the latter I use the lower part of the form. For strangers and those agreeing to pay at certain periods, I use both the upper and lower portions of the form. While there is a seemingly needless repetition of the two words, "for same," it is used the second time, at the end, so that there shall be no question as to the purpose for which the payments are made.

Very truly yours,

JOHN S. ENGS, Oakland, Cal.

DR. CUMMER TO CONDUCT ANOTHER GYSI CLASS

Last year Dr. W. E. Cummer, of the Royal College of Dental Surgeons, Toronto, Ontario, with the assistance of several prominent members of the dental profession, conducted a Gysi Class in Toronto, which was well attended. So great was the appreciation manifested by those who attended the class, and of such value was the information in their practices, that the demand for another class this summer has arisen. Doctor Cummer has therefore undertaken to conduct another class from August 16 to 28.

Modern methods in impression taking, Gysi methods in anatomical articulation, The Scientific Manipulation of Plaster and Vulcanite, and a complete presentation of the fundamentals in Esthetics, Cost Keeping, Office Arrangement and The Business Side of Dentistry constitute the subjects of the course.

Dentists who wish information on any of these subjects will make no mistake in joining this class.

AN EDUCATIONAL VISIT WITH A PATIENT

By G. Harold Cole, D.D.S., Watertown, N. Y.

Upon receipt of the article below, I wrote the author asking what effect the use of such talks as this had upon his practice. He says that these little talks are the only means he has of getting patients to accept a restoration at a price yielding fair remuneration. He states also that in very much more than the majority of cases, he is able to persuade people to accept a restoration. This little talk is only one of several which is in use, and the satisfactory annual increase in the amount of practice is in part laid to the use of such talks, and in part also to conscientious efforts in the patient's behalf.—Editor.

P. Doctor, I want this tooth out; it aches so hard.

Dr. Let me see your troubling tooth. Why, you don't want to lose that tooth. That is your six year molar; the most important tooth in your head. What you should have done is to have that nerve killed and the tooth restored to its former usefulness.

P. I have had two or three fillings put in that tooth and they came right out. My teeth are too soft to hold fillings and that one aches. I wish you would pull it immediately.

Dr. (After inserting a sedative). You may have had several fillings plugged into that tooth, but I doubt very much if you ever had a restoration in that tooth.

P. That tooth does not ache now, doctor. What do you mean by a restoration?

Dr. A restoration is a piece of work which restores the tooth to the proper shape, and usefulness to which it was first intended.

P. How much do you charge for a restoration?

Dr. That all depends on how much work it requires to produce it: anywhere from $4 to $10.

P. My, doctor, your price is high. I never paid over 75 cents for a silver filling in my life.

Dr. Yes, you probably paid 75 cents apiece for those two silver fillings or plugs which came out of that tooth, and in reality they were not worth one quarter of what you paid or they would be preserving your teeth to-day. The result is you paid a cheap price for a cheap filling, consequently you just came in here suffering with toothache. (Right here I show old extracted teeth, mounted on little plaster cylinders, containing some of the most hideous fillings imaginable, with overhanging margins, insufficient margins also—three in a row with approximo-occlusal fillings with insufficient contour. Also some in which all the original decay had not been removed. Then I show extracted teeth with properly prepared

fillings and properly contoured. Also badly broken down teeth which have been built up from the roots with Crandall's Alloy. These, I explain, cost more and are worth more than a crown.)

P. I always supposed that one filling was as good as another as long as it stayed in. (Here I point to the teeth with decay round the fillings and compare them with perfect fillings, talking all the time in plain United States language. I try never to use technical terms while talking to a patient.) Doctor, I am a poor woman and don't believe I can afford to have that kind of work done, although I can see it is much better than the kind I have had done.

Dr. Only the very rich can afford to have poor or cheap work done. They can afford to have it done every year if they have to, but you can't do that, for your income being limited, you should have the kind of work done that will give you good service and comfort for a number of years.

P. Maybe my teeth are too soft to hold that kind of work.

Dr. The man who told you that is either laboring under a delusion or is telling you that to cover up his lack of thoroughness in preparing the cavity. Your teeth are as hard as anyone else's at your age. There may be more decay in your teeth than in someone else's, but, after all the decay and undermined enamel is removed, there is no difference between the hardness of your teeth and anyone's else.

P. If you think you can save that tooth so it won't bother me again I guess I will let you do it.

(Everything that I do to that tooth I tell the patient—and why I am doing it. I also explain how I might slight it at different places as I come to them, were she not paying for good work, thereby fully explaining how she is getting a better service and her money's worth).

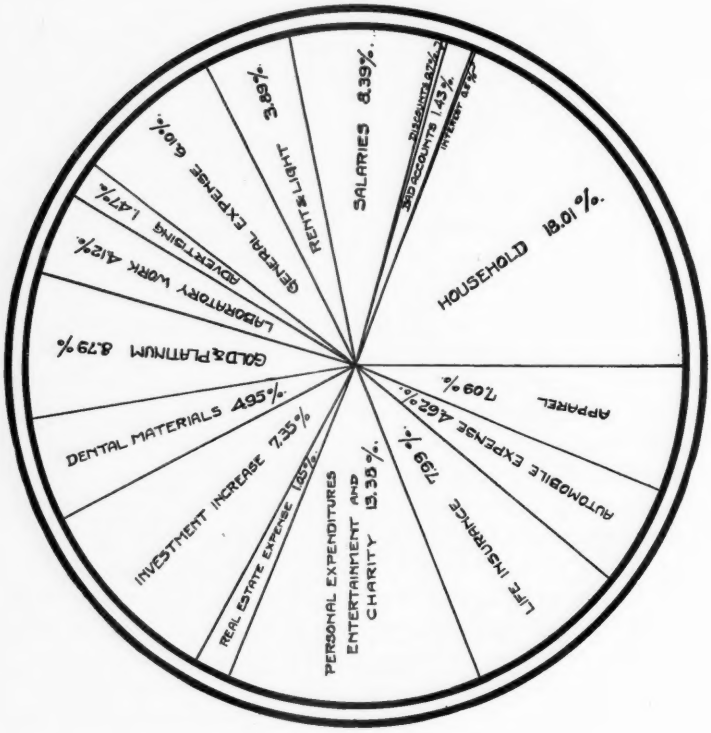
TEN GOOD REASONS FOR A CLEAN MOUTH

1. General Good Health.
2. Good Digestion.
3. Clean Breath.
4. Good Looks.
5. Prevents Swollen Faces.
6. Prevents Trouble with Throat, Nose, Ears, Eyes.
7. Prevents Infectious Diseases.
8. Prevents Tuberculosis.
9. Prevents Nervous Diseases.
10. Saves Money.

—*School Health News.*

WHERE HAVE MY PROFITS GONE?

By Nils Juell, D.D.S., Minneapolis, Minn.



Editor Dental Digest:

So many good things on the business side of Dentistry have been brought out in this splendid magazine, that it would be almost impossible to add anything new to what has already been said. I think, however, that the matter of figuring cost of doing business is of sufficient importance to justify in giving your valuable space. After closing my books this year and getting my annual financial statement I found that every dollar taken in from the practice of dentistry, I spent as indicated by the circle above. By recapitulating this way I find where I can make some savings and increase my net operating profit to 70 per cent. If this is of any interest to the readers, I shall promise to send you my new revised dollar January, 1916.

PRACTICAL HINTS

[This department is in charge of Dr. V. C. Smedley, 604 California Bldg., Denver, Colo. To avoid unnecessary delay, Hints, Questions, and Answers should be sent direct to him.]*

FOR SEALING MEDICAMENTS IN TEETH.—A pledget of cotton rolled in thick chloro-percha is superior to cotton and sandarac for sealing medicaments in teeth.—J. W. B., Phila.

SOLDERING RICHMOND OR GOSLEE CROWNS.—If band and backing are fluxed and heated before waxing up, the solder may be easily flowed around the labial surface.—R. R. NEWMAN, D.D.S., Baltimore, Md.

TO STOP LEAKING RINGS ON VACUUM CASTING MACHINE.—The paste garage men use to grind automobile valves will, when carefully used, stop leaking rings on Vacuum Casting Machines. To use, put a little of the finest grit all the way around the ring. Place on the bed plate and rotate completely around between the palms of the hands. C. V. STOCKBERGER, D.D.S., Syracuse, Ind.

TO REMOVE BROKEN DRILL FROM CANAL.—I lately tried this plan with perfect success. Drill a hole up along side the broken drill, deep enough and wide enough to admit a small wheel bur; then hold the wheel bur against the shank of the broken drill and turn the engine backward. The teeth of the bur engage the drill's shank, which is rotated and thus unscrewed. In the case mentioned, it at once came out a-skooting. —STEWART J. SPENCE, D.D.S., Chattanooga, Tenn.

METHOD OF MAKING LOWER PLATES.—When patient has worn upper and lower dentures for some time, and wishes to have new sets made, often in taking an impression for the lower, you will find the gums have shrunken considerably and a new plate, according to that impression, will give the patient trouble. Often they will complain that—"they are not hollowed out enough, like the old plate" (over the ridge), and possibly won't be satisfied until you have reset them, taking a lot of your time and patience. The cause is evident. They have become accustomed to the old plate, even if it don't fit the ridge any place. I find, in those cases, an

*In order to make this department as live, entertaining and helpful as possible, questions and answers, as well as hints of a practical nature, are solicited.

effective method is to make the old plate serve as an impression, making a model from it, being careful to preserve the flanges on the model; proceed then in the usual way, and when finished, you will have an exact duplicate of the old plate, where it fits the ridge, a satisfied patient minus the come back for the usual "trimming."—JOHN H. BEALS, D.D.S., Winchester, Ind.

[It seems to me that in most cases such a compromise with the ideal of good plate work would be unjustifiable.—V. C. S.]

A GOOD USE FOR DISCARDED DRINKING CUPS.—Rather than discard the used paper drinking cups, save them. They make excellent sanitary dental waste receivers. The cup of the present patient becomes of greater utility when in operation for the next. After each patient the cup is entirely discarded by burning. The method is clean, not unpleasant to the eye, economical and does away with the disagreeable cleaning of other receptacles.—JOSEPH M. ZAMETKIN, D.D.S., Brooklyn, N. Y.

TO MAKE A TEMPORARY PLATE, WHILE REMAKING THE OLD ONE.—In remaking old plates, patients very strenuously object to going without their teeth while the new ones are being made. To overcome this trouble, I take the old rubber base plate, and fill the holes left by removing the teeth, with plaster. After it has thoroughly hardened, I trim to about the original fullness of the teeth. This I place in the patient's mouth, and let them wear it until the new set is made.—A. F. DONAHOWER, D.D.S., Philadelphia, Pa.

QUESTIONS AND ANSWERS

Question.—Please publish a good formula that one can put in the glass of warm water, which is used through the day for syringing out cavities.—MERCED, CALIF.

ANSWER.—Personally I believe that clean pure water is preferable to any flavoring or medication whatsoever for this purpose.—V. C. S.

ANSWER.—Answering question of Dr. D. W. Barker, on page 252 of the April DIGEST, concerning the prevention of expansion of plaster, I beg to say that such prevention would of itself be of no avail. Even if a plaster-of-Paris cast had no expansion, it would crush out of shape during the flask-closing, and a plaster-of-Paris investment would soften so much during vulcanization as to permit shrinkage and warpage of the vulcanite in cooling. It is essential to employ a plaster which not only has no expansion but is too hard to crush in flask-closing and retains enough hard-

ness during vulcanization to hold the plate to place during cooling.—STEWART J. SPENCE, D.D.S., Chattanooga, Tenn.

ANSWER.—If Dr. D. W. Barker will use lime water for mixing plaster it will prevent expansion. Boil the water twenty minutes before making lime water. This is not original with me but I believe it does to a great degree prevent expansion, due I think to the fact that boiling eliminates the air in the water.—B. A. WRIGHT, D.D.S., Latrobe, Pa.

Question.—I would like to have advice in regard to the following case. The patient is a young lady about 25 years of age in good health. The left lateral incisor formerly in contact with the central, has been slowly separating distally from the central, and the separating process is apparently still progressing; the space is now about three mm. in width. There is also a slight protrusion. The tooth (lateral) is alive and normal with the exception of a gold filling of medium size in the mesial surface. The gum is entirely normal, healthy, closely attached and firm—no pyorrhea, gingivitis, nor calculus. I have removed the contact with the lower by grinding off slightly the edge of the occluding lower lateral. Is there any thing more that I can do? What is the cause of the shifting, its treatment and prognosis?—D. W. BARKER, D.D.S., Brooklyn, N. Y.

ANSWER.—I do not know that I can throw any light on the subject, but would suggest, unless you are mistaken in your diagnosis that there is no peridental irritation from serumal calculus, overhanging filling margin or what not; and as you are also satisfied that mal-occlusion is not responsible for the migration, I think I would advise an X-ray to see if a supernumerary tooth may not be wedging its way down between the central and lateral roots. If this latter is not the case, whatever else the cause may be, I should pull the wanderer back to its place with orthodontia traction cord, anchoring it there with a permanent splint set in lingual of central and possibly also cuspid. This case is very interesting and I hope you will let me know how you come out with it.—V. C. S.

Question.—Will you please tell me your method of casting aluminum plates, the success you are having and the appliance used for casting? Also, will you describe the technique of the wax plate for casting?—W. W. F.

ANSWER.—I may be wrong, but I invariably advise my patients against aluminum, because of the fact that I believe it disintegrates in some mouths, and that the vulcanite tends to separate from the aluminum base in all cases. If I were going to cast aluminum plates, however, I believe that of all the methods advocated, I should adopt the following: Fitting to any efficient suction machine a ground collar joint—receiving a

flask, shaped to retain plate in horizontal position, funneling to ground joint collar, with flat perforated floor where funnel shape starts. Base plate is waxed up with pronounced undercut all around rim. Place ten or twelve fair sized sprues around top of ridge and converging to floor of crucible. In casting aluminum, pressure or suction must be maintained for several minutes. After plate has been removed from investment, sprues are cut off long enough to serve as lugs to engage vulcanite. This is not original with me, I saw it at a National Association Meeting but do not remember the man's name who deserves credit.—V. C. S.

Question.—Just lately I have had several metal plates to repair or reset and all of them were very foul, ill-smelling things because the vulcanite had slightly drawn away from the metal leaving a space in which food, secretions, etc., collected and decayed. Is there no way to keep vulcanite and metal together to form a watertight union? In a case I have just finished, I used cement to join the vulcanite to a cast aluminum base, after I had finished the two pieces entirely separate from each other. That method seems to be practical and easier than vulcanizing directly to the metal with spurs, loops, etc., to hold the vulcanite. However, the cementing was simply an idea or experiment with me and I am anxious to know what some more widely experienced dentist thinks of the method or give me a better one.—D. M. STEELE, D.D.S., Morgantown, W. Va.

ANSWER.—I have experienced no difficulty with the attachment of vulcanite to gold plates when same were properly lugged and spurred with jeweler's tracing instrument, except sometimes in cases of revulcanizing. Your cement suggestion sounds good as applied to aluminum cases. Base of course would have to be prepared with parallel retention instead of undercuts.—V. C. S.

Question.—Will you be so kind as to tell me how to cast an aluminum plate with an Elgin machine? Investing, how many sprues, how large? I can cast them but they are not complete.—J. G. BUCHNER, D.D.S., Smith Center, Kans.

ANSWER.—Read answer to question above. The manufacturers of the machine could probably, however, give you the best possible answer to your question.—V. C. S.

Let us try to be content with the good things of life; it is useless to wish for the best, for there are not enough to go around.—*Farm Journal.*

DIGESTS

MOUTH INFECTION AS A SOURCE OF SYSTEMIC DISEASE

Dr. S. Marx of Minneapolis, Minn., read this paper. The systematic work of the Medical Clinic of the University of Minnesota in this field began two years ago. All patients had a preliminary examination of the mouth to determine gross evidences of alveolar or dental infection. All patients giving such evidence were referred for study and relief of the mouth conditions to the dental service. In recent years renewed interest had been aroused by the discovery of methods which revealed the presence of alveolar abscesses with an ease and directness previously impossible. The study of focal infections in the mouth was only a part of that of focal infections in general. Experience had shown that the principal sites in which chronic foci might be found were as follows: (1) the secondary nasal cavities, *e. g.* ethmoid, sphenoid, frontal, and maxillary; (2) the middle ear and mastoid antrum; (3) the tonsils; (4) the alveolar processes, including all forms of dental and paradental infections; (5) the genitourinary tract, chiefly the prostate and seminal vesicles in the male, and uterine adnexa in the female; (6) gastrointestinal tract, including the gall-bladder, and the appendix. The relation of the tonsils to the dissemination of septic infection had been increasingly recognized during the past decade and the work of Poynton and Payne, as well as others, was well known. It was, however, to the fourth group given above that they were paying particular attention at the present moment. Infection of this region might be roughly divided into two groups; (1) infections about the teeth, giving the so-called pyorrhea pocket, and (2) abscesses and necrosis in the jaw, usually at the tips of the roots, with or without sinus formation. The importance of these two groups appeared to be almost equal. The recent finding of endamebas by Smith and Barrett in pyorrhea, confirmed by other writers, gave a new aspect to the study. The discovery in emetine of a specific remedy against these parasites gave an opportunity to determine promptly whether or not the endameba was pathogenic and whether distant effects could be produced by it. The studies in their clinics and elsewhere did not appear to him to be conclusive, as yet, and much time would be required before definite conclusions could be reached. Doctor White said that he had reviewed the experience in their Medical Clinic from October 1, 1913, to January 1, 1915, with the purpose of showing the class of cases in which dental and paradental in-

fections were found with evident relationship to systemic disease. The admissions to the medical service for the period covered were 565. Of these 55, or 9.7 per cent. of the entire admissions had pyorrhea, alveolar abscesses, or both, and had been included as instances of mouth sepsis, with evident or probable relationship to systemic disease. These cases were tabulated and charts were shown.

	Tonsillitis	Pyorrhea	Alveolar Abscess	Chronic Arthritis	Acute Rheumatism	Endocarditis	Nephritis	Arteriosclerosis	Septic Ulcer	Anemia, Secondary Type	Anemia, Pernicious Type	Vaccine
Total, 55 cases	15	35	40	16	7	25	13	10	4	22	5	12
Tonsillitis	..	3	7	6	3	8	2	2	1	6	0	..
Pyorrhea	..	12	14	10	4	15	11	7	3	18	3	..
Alveolar abscess . . .	..	15	14	12	6	20	7	6	2	14	3	..
Tonsillitis, pyorrhea, and alveolar abscess	..	5	5	3	1	2	1	1	..	3	..	..

As shown in the 55 cases included in this study, tonsillitis occurred in 15, or 27.3 per cent. In 3 it occurred with pyorrhea, with 7 alveolar abscess, and in 5 with both. It showed that from this tabulation of 55 cases, as many more cases with mouth infection in their wards had been excluded because of a lack of any definite relationship to the clinical condition. Two conditions demanded that all foci should not be eradicated at once. The first was that in cases vaccines or bacterins were needed, if all foci had been eradicated and attempts at cultivation of bacteria had failed or gone awry, material for culture could not longer be secured. Secondly, the measures necessary for elimination of the infection frequently stirred up and increased the infection at the time and there was considerable danger, particularly in heavily infected individuals, of opening up many channels of infection, of severe local reactions, sometimes with necrosis, and frequently of aggravating a multiple joint infection, or even an endocardial or myocardial involvement. These dangers were real.

ASEPTIC TECHNIQUE

G. E. Brewer reviews his studies of this subject beginning with 1895, when 39 per cent. of all clean operative wounds occurring in his service in the City Hospital became infected, and continued to the present time, when the percentage of infection is less than 0.2 per cent. in the author's

service in the Roosevelt Hospital. The poor results in the early days were explained by the absence of a suitable modern sterilizing autoclave, the inefficient preparation of ligature and suture material, and the lack of training on the part of the house staff and operating room nurse in modern aseptic methods. Among the factors in the recent improvements are mentioned the following: Whenever possible a tub bath was given to the patient the night before operation, followed by shaving the wound area, and the application of a soap poultice. After from four to eight hours this was removed, the part scrubbed with soap and hot water for five minutes, and a wet mercuric chloride dressing applied. On the operating-table this dressing was removed by a sterile assistant, the parts rescrubbed for one minute, douched with ether, alcohol, and a 1:5000, solution of mercuric chloride. The wound area was surrounded by sterile towels, and the entire body covered by sterile sheets. Sterile caps, gowns, and gloves were worn by all participating in the operation. The towels around the wound area were changed as often as soiled, and always before the insertion of the cutaneous sutures. The technique was changed slightly in two classes of cases, operative treatment of fractures, and open operations on the knee joint. In these cases face masks or helmets were worn, and nothing entered the wound which had been touched even with the gloved hand, all manipulations being carried out by instruments. More recently the long-sleeved operating gown has been introduced.—*Medical Record.* (*Taken from J. A. M. Assoc.*)

LAWS OF NEW YORK.—BY AUTHORITY

CHAP. 54.

AN ACT to amend the public health law, relative to the registration of licenses to the practice of dentistry.*

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section one hundred and ninety-nine of chapter forty-nine of the laws of nineteen hundred and nine, entitled "An act in relation to the public health, constituting chapter forty-five of the consolidated laws," is hereby amended to read as follows:

§ 199. REGISTRATION. Every person practicing dentistry in this state and not lawfully registered before April seventeenth, eighteen hundred and ninety-six, shall register in the office of the clerk of the county where his place of business is located, in a book kept by the clerk for such purpose, his name, age, office, and post office address, date and number of

*Became a law March 11, 1915, with the approval of the Governor. Passed, three-fifths being present.

his license to practice dentistry and the date of such registration, which registration he shall be entitled to make only upon showing to the county clerk his license or a duly authenticated copy thereof, and making an affidavit stating name, age, birthplace, the number of his license and the date of its issue; that he is the identical person named in the license; that before receiving the same he complied with all the preliminary requirements of this article and the rules of the regents and board as to the terms and the amount of study and examination; that no money, other than the fees prescribed by this article and said rules, was paid directly or indirectly for such license, and that no fraud, misrepresentation or mistake in a material regard was employed or occurred in order that such license should be conferred. The county clerk shall preserve such affidavit in a bound volume and shall issue to every licentiate duly registering and making such affidavit, a certificate of registration in his county, which shall include a transcript of the registration. Such transcript and the license may be offered as presumptive evidence in all courts of the facts stated therein. The county clerk's fees for taking such registration and affidavit and issuing such certificate, shall be one dollar. A practicing dentist having registered a lawful authority to practice dentistry in one county of the state and removing such practice or part thereof to another county, or regularly engaging in practice or opening an office in another county, or shall have his office, practice or any part thereof removed from one county to another by an act of legislature creating a new county from a then existing county, thereby causing his office or practice to be situated in a new county, shall show or send by registered mail to the clerk of such other or new county his certificate of registration. If such certificate clearly shows that the original registration was of an authority issued under seal by the regents, or if the certificate itself is indorsed by the regents as entitled to registration, the clerk shall thereupon register the applicant in the latter or new county, on receipt of a fee of twenty-five cents, and shall stamp or indorse on such certificate, the date, and his name, preceded by the words, "registered also in . . . county." and return the certificate to the applicant. Any person who having lawfully registered as aforesaid shall thereafter change his name in any lawful manner shall register the new name with marginal note of the former name; and shall note upon the margin of the former registration the fact of such change and a cross reference to the new registration. A county clerk who knowingly shall make or suffer to be made upon the book of registry of dentists kept in his office any other entry than is provided for in this section shall be liable to a penalty of fifty dollars to be recovered by the state dental society in a suit in any court having jurisdiction.

2. This act shall take effect immediately.

State Of New York }
Office of the Secretary of State. } ss:

I have compared the preceding with the original law on file in this office, and do hereby certify that the same is a correct transcript therefrom and of the whole of said original law.

FRANCIS M. HUGO,
Secretary of State.

ORGANIZED SCHOOL FEEDING IN NEW YORK.

In 1907 the New York public was aroused by the alarming statements which appeared in public print that thousands of children went to school each day suffering from lack of food. An investigation was made and, as a result of the popular interest, there was organized the New York School Lunch Committee, the purposes of which are:

1. The provision of nourishing lunches on a self-supporting basis for all school children.
2. Special observation of children whose physical condition is such as to give evidence of lack of proper nourishment in order to determine the underlying causes by a study of their homes and environment.
3. The formation of special classes of mothers for instruction in the proper care of children.

At the present writing, there are 20 schools, registering 32,000 children, where the penny-a-portion service is operated.

The need for such a community service was naturally most pressing in the districts where people were poor; where mothers worked in the factory by day, and where the children depended for food on the few pennies which purchased candy from the vendors about schoolhouses.

An experiment was tried in the equipment of a kitchen in a school building, where soup, sandwiches, puddings and cocoa were provided at the rate of one cent a portion—the child being required to first purchase a bowl of hot soup.

Fundamentally, the service is devoid of any mark of poor relief. During the last school term 1,249,489 portions of food were sold, for which the children paid $12,494.89. In supplying nearly a million and a half portions, a net deficit of $4,624.52 was incurred. This is equal to a little over a third of a cent per portion, and was paid from funds entrusted to the Department of Social Welfare of the New York Association for Improving the Condition of the Poor by Mrs. Elizabeth Milbank Anderson.—*Department of Health of New York, No. 26.*

AN EPITOME OF CURRENT DENTAL AND MEDICAL LITERATURE

[*The Dental Summary*, May, 1915]

Regular Contributions

Fractures of the Inferior Maxilla. By Henry S. Dunning.
Office Credits and How to Control Them. By Doctor McVea.
Zonetherapy. By Wm. H. Fitz Gerald.
My Experience with Bromural in Dentistry. By J. W. Roth.
Sterilizing the Area of Injection. By N. L. Burke.
The Dental Society. By F. A. Keller.
Accurate, Rapid and Easy Laboratory Methods. By I. J. Dresch.
*Pulp Treatment and Filling of Root Canals. By Thos. P. Hinman.
Cavity Preparation as a Treatment of Dental Caries. By Edgar D. Coolidge.
*Chronic Maxilla Empyema—Its Remote Effects as Applied to Dentistry. By E. D. Robbins.
Excerpts from the Histo-Genesis, Evolution and Revelation of Amalgam. By T. L. Mewborn.
Service and Compensation. By T. W. McFadden.
Analgesia. By Henry J. Feltus.
Prevention of Malocclusion. By B. Frank Gray.
Mixed Treatments in Some Forms of Dental Lesions. By Adolph Bernard.
The Colorado Springs School Dental Infirmary. By B. Frank Gray.
The Business Saving Side of Dentistry. By A. F. Linscott.

Health Conservation

Vaccine Treatment. By C. P. Emerson.
The Status of the Dental Profession and Its Relation to Public Health Questions. By Homer C. Brown.

PULP TREATMENT AND FILLING OF ROOT CANALS

By Thomas P. Hinman, Atlanta, Ga.

"Whenever pressure anæsthesia is used," the area over the exposure must be carefully cleaned off physically, removing, not only bacteria, but also their by-products. If this is not done destructive processes may be set up. One case under the author's observation for over a year, he has not been able to control. Another case referred to him in which pressure anæsthesia was used in the lower first molar, destroyed the socket of this tooth, created necrosis, caused loss of the second molar, and with difficulty, the third molar was saved. Only in exceptional cases does the author employ pressure anæsthesia.

Pressure anæsthesia may be used in cases of recent exposure and in cases of exposure by decay. But previous to pressure, a reasonable condition of sterility must be obtained by the use of 40 per cent. solution. of sulphuric acid over the area of exposure for five to ten minutes.

Novocain and suparenin pluglets are recommended because they may be sterilized by boiling and there is little, if any, toxicity. The rubber dam which has been sterilized with 75 per cent. alcohol and the sterilized

clamp should be used whenever possible and all instruments used in the operation also sterilized.

Pressure anæsthesia is contraindicated in cases of pulp abscess. Cases in which the pulp has a little pus while the remainder of the pulp is vital or semi-vital. In such cases arsenic is indicated. Do not apply arsenic at the point of exposure. Make a fresh cavity in the dentine as far as possible from the exposure, put in the arsenic and seal it with cement. In that part of the cavity containing the exposed aching pulp, place an analgesic solution; as the one recommended:

Oil of cloves,	1 dram
Chloroform	1 dram
Cocain	2 grains

Cover this lightly with a piece of cotton and then paint the surface of the cotton with sandarac varnish.

With slow absorption, the arsenic will have the effect in 48 hours. In some cases it produces congestion in a few hours. In all cases, the congestion should be relieved by removing the arsenic, then open into the pulp and put in the analgestic solution recommended.

The attempt to remove the pulp should not be made until after the pulp is thoroughly devitalized and practically mummified by the use of oil of cloves. If, when entering the pulp, there is sensation, seal in some drug such as oil of cloves until sensation has ceased. If there is bleeding when the pulp has been removed, pack the pulp canal with a sterile Johnson and Johnson absorbent point dipped in alcohol and leave in the canal for about a week. To wash out the blood in a cavity or pulp canal use warm normal salt solution.

The use of Shrier's paste-sodium and potassium, is recommended for removing the contents of canals and enlarging, then 4 per cent. solution of sulphuric acid is also recommended, working it down with a broach. If an obstinate obstruction is encountered, seal in the canal for 24 hours, sulphuric acid.

Acetone is used for drying out the canals because of its great affinity for water. Johnson and Johnson absorbent points are also recommended.

To fill the canals, Dr. Callahan's rosin and chloroform solution (a piece of resin, about the size of a pea in an ounce of chloroform) is put in the pulp chamber and worked down into the canal. Gutta percha points are then packed well down into the canals, and in the pulp chamber, a piece of gutta percha is placed and considerable pressure is exerted until the patient flinches. Additional points are put in and driven and worked down and plugged in the canals so as to absolutely hermetically seal the cavity. The roots of the teeth so filled may be expected to be sore for a few days. The pulp chamber is filled with oxychloride of zinc.

[*The Dental Summary*, June, 1915]

Regular Contributions

The Day of the Shell Crown is Past. By Joesph A. Gardner.
Diagnosis and Treatment of Trifacial Neuralgia. By Hugh W. MacMillan.
The Value of Standards and Records. By Charles M. Baldwin.
Accurate, Rapid and Easy Laboratory Methods. By I. J. Dresch.
To Save or not to Save. By James F. Hannon.
President's Address. By Chas. A. Burbridge.
Cement for Mending Plaster Casts. By W. Buzzell.
Dental Science and Literature. By Russell W. Bunting.
Root Treatment. By Thos. P. Hinman.
1. The Section on Stomatology: Its Needs, Its Duties, and Its Opportunities. 2. The Field of Stomatology. By William C. Fisher.
A Practical Suggestion. By Charles Lane.
The Section on Stomatology as a Factor in the Evolution of Dental and Medical Science. By George V. I. Brown.
Relation of the Dentist to the Physician. By A. C. Musgrave.
Technic of Investing Wax Patterns. By R. L. Girardot.
Analgesia. By G. W. Tainter.
Some Things Needed in our Dental Laws. By J. W. Daniels.
Filling Root Canals and Treatment of Deciduous Teeth. By W. R. Alvord.

[*Journal of the National Dental Association*, May, 1915]

Presidents of the National Dental Association.
Interpretation of Dental Roentgenograms. By E. J. Eisen, D.D.S.
Responsibilities of the State Society Officers. By Homer C. Brown, D.D.S.
Conduct of State Societies and their Components in Planning of Programmes. By Arthur D. Black, A.M., M.D., D.D.S.
The Research Department:
Thomas W. Evans Museum and Dental Institute. By Weston A. Price, M.S., D.D.S.
Oral Prophylaxis in its Relation to Pyorrhea and its Treatment. By Arthur T. Henrici, M. D. and Thomas B. Hartzell, M.D., D.D.S.
*Are Endamebae Important Factors in the Etiology of Pyorrhea Alveolaris. By Weston A. Price, M.S., D.D.S., and Le Rue P. Bensing, A.B.
Research Fund Report.
Proceedings of the House of Delegates.
Annual Meeting of the Members of the Dental Protective Association.
Memorial Resolutions. By Dr. John N. Crouse and Dr. H. B. McFadden.
Editorial: Dental Roentgenograms and the Diagnosis of Mouth Lesions. Simplified Spelling used in the *Journal*.

ARE ENDAMEBAE IMPORTANT FACTORS IN THE ETIOLOGY OF PYORRHEA ALVEOLARIS

By Weston A. Price, M.S., D.D.S., and Le Rue P. Bensing, A.B.

CONCLUSIONS

Owing to the fact that the evidence is largely circumstantial, which has indicated that endamebæ are the chief causative factor in pyorrhea alveolaris, based, in a great part, on the known bad reputation of its cousin's species, the endameba histolytica of amebic dysentery, and

since the evidence against this conclusion is in great part incomplete, we strongly urge the withholding of judgment until further researches shall have established sufficient of the following data.

1. The successful production of the lesions of pyorrhea alveolaris by inoculation with endameba, according to Koch's law, namely, (a) an organism, if it causes the disease, must be present in all cases, (b) the organism shall be isolated in pure culture, (c) a pure culture, if inoculated into a susceptible animal, must produce the disease, (d) the chemical products must produce the same alterations.

2. Or, the successful production of the lesions by inoculation with some other organism, or organisms, or by some other means.

3. Or, the demonstration that the endamebæ of the mouth are non-pathogenic and are incidental or helpful inhabitants of the oral cavity as scavengers; not only harmless of themselves, but not producing either toxins or harmful enzymes.

4. If the endameba buccalis is the chief causative factor in pyorrhea alveolaris why is the endameba Kartulisi found alone in so many of the typical cases?

5. The establishment of the rôle of emetine, including a close differentiation between its amebicidal and its bactericidal actions.

6. A determination as to whether the beneficial action of emetine is that of an amboceptor, acting upon the bacteria or protozoa with their protein and toxin contents (the toxiphor group) through the agency of the complement, and also whether the action of emetine is that of a complement as in the case of lecithin with snake venomen.

7. A determination as to what is involved in so-called bacteremia, which is clinically so common as a result of instrumentation and of certain medications and is this action bacteremic, septicemic or toxemic.

8. The establishment of the precise local tissue changes involved in the development of the lesion of pyorrhea alveolaris and of the successive processes constituting its repair.

9. The establishment of the precise rôle served by instrumentation in the process of repair of pyorrhetic lesions and the significance in this process of the removal of foreign material, bacterial plaques and degenerating tissue, also of polished surfaces, local stimulation of circulation by frequent massage, etc.

10. The development of a means for the reattachment of vital tissue to dead and denuded cemental surfaces of roots.

11. The establishment of the rôle of pyorrhea alveolaris pockets as culturing places for pathogenic organisms, as those of the streptococcus-pneumococcus group, which from this lesion as a primary focus, affect

other organs and tissues of the body, and the establishment of the symbiotic effects of the organisms on each other.

12. Granting that the endameba is the causative factor of pyorrhea alveolaris and that emetine hydrochlorid is a specific for it, why has no pyorrhea pocket, of the many cases treated by the authors, been more greatly modified in the way of repair than the more or less marked improvement of the following factors: the quantity of pus flowing; the relative quantity of micro-organisms growing in the pockets and the general tonicity of the surrounding connective tissues, with practically no considerable change within several months of the bone lesion itself surrounding the tooth.

13. And chiefly, by the establishment of a mass of circumstantial evidence, bearing on the above and related problems, which shall be so carefully interpreted and tabulated that it will indicate the probable answers to most all of the above questions, before they can be clinically and technically established. This will best be done by as large a number of skilled observers as possible, including those skilfully treating pyorrhea alveolaris, either as a local lesion, as a systemic lesion, or as both; those treating other diseases primarily but also observing, competently, the effects on local mouth lesion and those studying by intensive methods in pathological and bacteriological laboratories, etc., etc., sending reliable statements of their observations and findings to some central committee or organization, such as the Research Commission of the National Dental Association, for classification and publication, a considerable quantity of which has already been received.

A CASE OF EXTENSIVE ALVEOLAR ABSCESS WITH PYEMIA

By Joseph H. Kauffmann, D.D.S.

In reviewing this case, the chief points of interest, and the deductions therefrom, are:

First: Every operation for the extraction of a diseased tooth or the roots of a tooth must be complete, and if under any circumstances the operator is not absolutely positive of the completeness of the operation he should so inform the patient, and complete the work as soon as possible.

Second: In any doubtful case, a radiograph is useful—in fact it is indispensable in the more difficult cases.

Third: Neglected roots, when allowed to remain and to give rise to alveolar abscess, will not alone cause local destruction of tissue but may become the source of an incessant and most dangerous absorption of virulent bacteria and the accompanying products of putrefaction and decomposition—or, more plainly speaking, of the absorption by the blood

and lymphatics, the primary fluids, of pus with its attendant myriads of pyogenic bacteria. These, with other morbid changes, in persons of reduced vitality, react in the most serious form of auto-intoxication known, viz., true general pyemia—as was shown in this particular instance.

Fourth: Such a condition, when present in a pregnant woman, not alone endangers her own life, but by way of the fetal circulation the life of the fetus, causing the child to be born already diseased or even dead.

Fifth: Only the most favorable turn of circumstances and careful systemic treatment, coupled with strict antiseptic and prophylactic local treatment, can save the life of a person thus affected, the usually fatal result of pyemia being well known and recorded in medical literature.

[*The Dental Cosmos*, June, 1915]

Recent Discoveries Concerning the Etiology and Treatment of Pyorrhea Alveolaris. By Francis E. Stewart, Ph.G., M.D.

Neuralgia. By D. H. Squire, D.D.S.

Oxidation and Reduction of Hydrogen Dioxid. By Geo. T. Fette, Ph.D., A.M., D.D.S.

The Interdependence of Pyorrhea Alveolaris and Syphilis. By Geo. H. Reed, D.D.S.

The Chemical Constitution and the Physico-Chemical Properties of Dental Amalgams. By James W. McBain, M.A., Ph.D., and W. A. Knight, M.A., M.Sc.

The Dental Medicines of Pedanios Dioscorides. By Hermann Prinz, A.M., M.D., D.D.S.

Some Thoughts on Pyorrhea Alveolaris. By Emilio M. Agostini, D.D.S.

*The Present Status of Adenoid and Tonsil Operations. By Carl W. Waldron, M.B., D.D.S.

The Cause of Discoloration of Suprarenin Hydrochlorid. By J. L. Elphinstone, D.D.S., L.D.S.

Etiology of Symmetry in Dental Caries. By I. B. Horowitz, D.D.S.

School Dentistry. By Frederick A. Keyes, D. M. D.

The Structural and Other Changes Arising in Connection with Metals Used in the Mouth. By W. B. Hepburn, L.D.S.

Two Unusual Cases Involving Premolars. By Robert H. Ivy, M.D., D.D.S.

Metallography. By B. R. Bakker.

Symptoms of Local and General Diseases as Manifested in the Mouth. By Robin Adair, B.S., M.D., D.D.S.

Dentrifrices and Mouth-washes. By S. L. Silverman, D.D.S.

THE PRESENT STATUS OF ADENOID AND TONSIL OPERATIONS

By Carl W. Waldron, M.B., D.D.S.

(1) Tuberculosis of the tonsil may be demonstrated histologically in some two to five per cent. of tonsils removed by operation.

(2) Tuberculous glands of the neck are found more frequently than tuberculous tonsils. It has been demonstrated by Wood that the tubercle bacilli may pass through the tonsil, producing tuberculous adenitis without producing any evidence of tuberculosis of the tonsil itself.

(3) Tuberculosis of the tonsil without appreciable glandular enlargement has been reported by Sewell.

(4) Tuberculosis of the tonsil is usually secondary, but may be a primary infection, especially in children.

(5) Ingals states that there is no direct connection between the cervical lymph nodes and the pulmonary lymphatics, and, therefore involvement of the lungs associated with cervical adenitis must be a systemic infection rather than a disease of the lymphatics.

(6) Tuberculous glands frequently subside permanently following tonsillectomy, and even when recurring or enlarging, show a greater tendency to heal, and the individual enjoys better health following the operation.

INDICATIONS FOR ADENOIDECTOMY

In the absence of indications for tonsillectomy, should adenoidectomy alone be performed? Granting the absence of cervical adenitis and a definite history of sore throat, it should be performed for the following indications:

(1) *Mouth breathing*, with its consequent impairment of health, lassitude, arrest of growth, frequent colds, cough, etc. The previous nasal examination will determine the advisability of crushing outward the inferior turbinates at the time of operation, according to Killian's procedure.

(2) *Intermittent or increasing deafness*. Even when impairment of hearing of the child cannot be satisfactorily demonstrated, the appearance of the tympanic membrane may indicate a chronic inflammatory condition of the Eustachian tubes. These conditions are usually greatly benefited by complete removal of the adenoid tissue and the mucous membrane from which it arises.

(3) *Asthma, stammering, laryngismus stridulus, chorea, nocturnal enuresis*. All of these, and even convulsions and epilepsy, have been attributed to the presence of adenoids. Undoubtedly some of these conditions have been helped by adenoidectomy, and adenoids should be removed, if present, but not with the assurance that the general condition will be benefited.

In conclusion, I would urge a more complete coöperation between the pediatrician, dentist, and laryngologist. This would be of great value in the study of the relation of diseases and conditions of the mouth, nose, and throat to one another and to the general health of the child. The present medical school inspector's diagnosis of "enlarged tonsils" is not pathological, and should be supplanted by a thorough physical examination, and an accurate history, taken before operation, is advised. Finally, following operation, every effort should be made to keep in touch with the patients, in order to determine as far as possible the ultimate results.

[*Items of Interest*, May, 1915]

A Prophylaxis Symposium:
Instructions to Patients in Regard to the Cleansing of Teeth. Foreword.
Contribution by Grace Rogers Spalding, D.D.S., Detroit, Mich.
Contribution by Gillette Hayden, D.D.S., Columbus, Ohio.
Contribution by John Oppie McCall, D.D.S., Buffalo, N. Y.
Contribution by R. R. Johnston, D.D.S., Pittsburgh, Pa.
Contribution by A. C. Hamm, D.D.S., Denver, Col.
Contribution by Andrew J. McDonagh, D.D.S., Toronto, Can.
Contribution by J. D. Patterson, D.D.S., Kansas City, Mo.
Contribution by F. H. Skinner, D.D.S., Chicago, Ill.
Contribution by Austin F. James, D.D.S., Chicago, Ill.
Contribution by Paul R. Stillman, D.D.S., New York City.
Contribution by M. L. Rhein, M.D., D.D.S., New York City.
Mouth Hygiene Directions, By Jules J. Sarrazin, D.D.S., New Orleans.
Instructions for the Home Care of the Mouth. By Alfred C. Fones, D.D.S., Bridgeport, Conn.
Prophylaxis During Orthodontic Treatment. Contribution by Dr. R. Ottolengui, New York.
What Shall We Do with the Tooth Brush? By Ernest C. Dye, A.B., D.D.S., Greenville, S. C.

[*Items of Interest*, June, 1915]

The Identification of Amœbæ in Dry Smears, from Cases of Pyorrhea. By Thomas Le Cléar, New York City.
A Cure for Pyorrhea is No New Thing in Dentistry. By Paul R. Stillman, D.D.S., New York City.
The Emetin Error. By Jules J. Sarrazin, D.D.S., New Orleans.
What is the Highest Function of the Dental Profession? By Maurice William, D.D.S., New York.

Prosthodontia

Bridgework Conducive to Health and the Instruments for Constructing It. By Herman E. S. Chayes, D.D.S., New York.

Orthodontia

A Consideration of the Question of Early Treatment of Malocclusion. By Frederick C. Kemple, New York.

[*The Dental Review*, May, 1915]

The Evolution of Dentistry. By E. C. Kirk.
Posterior Restorations. By J. F. F. Waltz.
Relative Values. By J. P. Harper.
President's Address. By H. F. Hagemann.
Some of the Early History of Dentistry, with Special Reference to the Introduction of Arsenic by Dr. Spooner in 1836. By Dr. Kennedy.
The Voice in Its Relation to Artificial Teeth. By J. H. Woolley.
Our Friend the Blood. By W. Dunn.
Recent Advances in Dentistry. By G. N. Gilbert.

[*The Dental Review*, June, 1915]

Importance of Early Diagnosis of Malignant Tumors of the Mouth. By V. P. Blair.
Suggestions for Making the Dental Student a Better Student. By A. D. Black.

A Dental Critique. With Suggestions. By B. J. Cigrand.
Pyorrhea in Its Medical Aspect. By F. Brook.
President's Address. By J. M. Barcus.
A Treatment of Pyorrhea Necrotic Tissues. By J. S. Bridges.

[*International Journal of Orthodontia*, April, 1915]

Original Articles

The Importance of Correcting Malocclusion During the Period of Tooth Eruption. By M. N. Federspiel, B.Sc., D.D.S., M.D., Milwaukee, Wis.
Malocclusion of the Temporary Teeth. By Angelo Chiavaro, M.D., D.D.S., Rome, Italy.
Notes on the Early Treatment of Malocclusion. By P. J. Coebergh, Utrecht, Holland.
Working Retainer. By Guy B. Steadman, D.D.S., St. Paul, Minn.
Practical Orthodontics. By B. E. Lischer, D.M.D., St. Louis, Mo.
Case Report. By R. C. Willett, D.M.D., Peoria, Ill.

Current Literature

Care of the Teeth of Boys in Girard College
Medical Aspects of the Second Dentition
Tungsten and Molybdenum
Angle's New Appliances
Mechanics of Some of the Bones of the Face

[*New York Medical Journal*, April 3, 1915]

THERE IS A THEORY THAT VERY THOROUGH MASTICATION OF MEAT IS CONTRARY TO NATURE. WHAT ARE YOUR VIEWS?

You apply to us for our views on the subject; our opinion may be put a little less dogmatically than a dictum of Chittenden or Hammarsten. Where there is discord between Nature and experiment, we do not usually accept the latter. The view that the thorough chewing of meat is Nature's process seems to us to be true, though it certainly does not err on the side of novelty. It is supported by physiology, comparative anatomy and the habits of mankind. However, it is not impossible that man may abjure these ancient habits and become as Gegenbaur says, psomophagic, or a bolter of his food (*Vergleichende Anatomie der Wirbelthiere*). Appetite and our senses serve us to the full as much as mechanical force, i. e., mastication. We think it quite possible that sight and smell are more provocative of digestion than the winding up of the jaws to champ independently of their owner's consciousness. We cannot imagine a more distressing sight than the spectacle of sensible men and women chewing gum. They must have ceased to discern the quality of true utility if they employ their energies in this way. The notion of chewing any kind of food as a stimulant for appetite can have entered the minds of those only who snatch at sweets and druggists' kickshaws that they may conceive a fictitious execution of digestive operations. Sweets, and chewing gum and a regimen like Chittenden's (*The Nutrition of Man*) may refresh, and may even temporarily comfort the body, after labor of muscle or brain;

they do not sustain it, not even in the lighter kinds of labor. They unseat digestion and pervert appetite. Work done by the aid of sweets, gum, and carbohydrate (*op. cit.*, p. 213) is mere experiment—an exhibition of the prodigious in effort or in physical competition, of the kind which college athletes or strong minded girls give, for example; they are of the few who work after artificial eating (Read, *Fads and Feeding*).

Concerning the problem—whether the digestive organs of man are after the fashion of psomophagic or of poltophagic animals, as Gegenbaur says—the article by Hibbert (*Lancet*, 1, p. 1334, 1905) is the source of much light, and should be carefully read over. On the whole, the material use of mastication has risen in estimation. (Hutchison, *Food and Dietetics*, p. 412.)

[*New York Medical Journal*, April 17, 1915]

[*American Journal of Tropical Diseases and Preventive Medicine*, Feb. '15]

PEMPHIGUS OF THE MOUTH AND THROAT

By Robert Sonnenschein

Pemphigus of the mucous membranes shows not intact vesicles, but ragged, grayish white, macerated membranes, smooth, red or granulating erosions. There may be thickening of such structures as the epiglottis, of the true or false cords, or at times ulcerations, which later produce scars and distortions. Lesions may be located anywhere in the mouth and upper respiratory tract. As a rule the process spreads from the mouth downward into the pharynx, larynx, or even trachea and bronchi. The rapid changes in the appearance of the lesions, the healing in one place with the development of new areas in another spot, are, together with the history of pain in the mouth and throat, loss of weight and strength, quite characteristic. The early appearance of lesions in the mouth and throat gives an exceedingly poor prognosis. The treatment appears to be of little avail.

[*Journal of American Medical Association*, April 24, 1915]

THE PUBLIC AND LOW-GRADE MEDICAL COLLEGES

The information in Table D is of special importance to the public; it indicates the states that are not adequately protected against untrained doctors. The table shows that the boards of thirty-two states are making some use of the legal power conferred on them to discriminate between medical colleges and to refuse recognition to those which are of low standard or are not properly equipped to furnish their students a satisfactory training in modern medicine. Of the thirty-one state boards, nine* will

*These states are Alabama, Colorado, Iowa, Indiana, Minnesota, New Hampshire, New Jersey, North Dakota and South Dakota.

not license the graduate of any medical college unless he had completed at least two years of work in an approved liberal arts college before taking up the study of medicine. There are seven states* which have not given the boards full legal authority to pass on the character or standing of the colleges whose graduates may be admitted to examination, and in nine other states,† the boards are apparently given ample power, but, so far as the reports indicate, and for various reasons, the boards are not using that power. Arkansas and Florida each have three separate and independent licensing boards, one of which—the regular board—has refused to recognize low-grade colleges under its jurisdiction. We learn of no such action by the other two boards in each of these states. It goes without saying that since the graduates of these low-grade medical colleges cannot secure licenses in thirty-two states, they will flock to those in which they are still eligible. These sixteen states, therefore, are certain to be the dumping-ground for the output of these inferior colleges just so long as the practice acts permit, or so long as the state licensing boards do not take action against them. The people have the right to expect that the state (on which the national constitution places the responsibility) will grant them proper legislation, and that the licensing board—the only legal body having these matters in charge—will take such action as is necessary to protect them against the ill-trained product of low-grade medical colleges.

PROSPECTIVE MEDICAL STUDENTS AND LOW--GRADE MEDICAL COLLEGES

One of the tables published this week (Table D) shows the states in which the diplomas from certain medical colleges are not given unqualified recognition. The table, which is based on official reports from the various state boards, indicates that in from ten to thirty-three states the diplomas issued by thirty-five medical schools are not recognized, and that in these states the graduates of these thirty-five schools are not admitted to the examinations for licenses to practice medicine. It is highly important, particularly in the interests of prospective medical students, that this information should receive wide publicity. Before selecting a medical school, the student should know whether or not the training furnished and the diploma given by that school will qualify him for examination and for a license to practice medicine in any state he may choose. Such information, that is, the fact that recognition has been withdrawn or withheld from certain medical colleges, has not always been given publicity by state boards, and of course, is not published in the announcements of the colleges affected. Many students, doubtless, have not been aware of the

*These states are Arizona, District of Columbia, Idaho, Massachusetts, Montana, Tennessee and Wyoming.

†These states are California, Kansas, Maine, Missouri, Nebraska, Nevada, North Carolina, Utah and Washington.

facts until long after they have matriculated, or even, perhaps, until they have applied for a license to practice. Hundreds of students, in fact, have enrolled in low-grade medical colleges, have spent large sums of money, and have devoted four years to study, or have graduated before they have learned not only that they have not received a training in modern medicine, but also that they have received diplomas which are worthless in a large number of states. This is positively wrong and places an irreparable handicap on these students. The important information regarding the non-recognition of low-grade medical colleges by state boards should be in the hands of every prospective medical student before he chooses his college, so that he may avoid a bad start on his life's work. The intelligent student, if he is fully informed, would certainly not waste his time and money in a low-grade, unrecognized institution, when in the same time and with perhaps even less money he could obtain a training in a thoroughly well-conducted medical school. There is certainly no dearth of well-conducted, thoroughly equipped medical colleges in which the student can get a training that will enable him to render excellent service to the people who will depend on him for medical attention or hygienic instruction.

[*Journal of American Medical Association*, May 27, 1915]

[*Policlinico Rome*]

TUBERCULOSIS OF THE TONGUE

Stropeni comments on the remarkable rarity of tuberculosis lesions in the tongue. It seems to indicate unusual resisting power on the part of the tongue tissues. Hence the prognosis is bad when a secondary process develops in the tongue as this is a sign that the general resisting power is at a low ebb. In twenty-nine cases on record the tuberculous lesion in the tongue was mistakenly assumed to be cancer, and extensive mutilating operations were done. Rapid and fatal recurrence followed in most of the cases, and signs of tuberculosis in other organs showed that the tongue affection had been a secondary process, the system already undermined. A primary tuberculous process in the tongue is a different matter, and a complete cure is the rule after thorough excision of the focus. Curetting and cauterization are inadequate; in advanced cases, roentgenotherapy may be preferable to excision. The focus should always be removed also with a secondary lesion unless the lungs are involved. When this is the case, roentgenotherapy is better. Stropeni gives references to recent literature on tuberculosis of the tongue, including fourteen Italian and fourteen German works and only three from English literature.

His attention was called to the subject by a case of apparently primary

tuberculosis of the tongue in a robust man of 33. A hard, whitish bunch developed on the frenulum, where it joins the base of the tongue. It soon ulcerated and was very painful. After two months of household remedies he entered the hospital where mercurial treatment was instituted, notwithstanding the negative Wassermann, and the lesion was repeatedly cauterized. Under three months of this the ulceration grew worse and worse, the neighboring glands became involved and suppurated, with fistulas. Then the tuberculin skin tests and inoculation of guinea-pigs with pus gave positive reactions but no tubercle bacilli could be detected in the sputum. Treatment was then changed to merely rinsing out the mouth with mild boric acid solution, and the angry lesions retrogressed to some extent, one fistula healing. The ulcerations on the tongue were then exposed to the Roentgen rays and benefit was apparent almost at once. Eight sittings were given in the course of a month, under which the tongue affection healed smoothly and completely. The patch of swollen glands in the neck was then excised as the suppuration kept up. The cure was then complete and there have been no signs of recurrence during the six months since and the man feels entirely well.

[*Medical Record*, May 15, 1915.]

A STUDY OF MOUTH INFECTIONS AND THEIR RELATION TO PYORRHEA

The Bulletin of the New York City Health Department states that an interesting study concerning the relation of certain microörganisms to pyorrhea, and designed to devise, if possible, preventive measures against this condition is now being carried on at Public School 21 by bacteriologists of the Bureau of Laboratories of the Department of Health. A special class has been organized, consisting of children whose gums show evidences of the possible beginning of pyorrhea. This will be subdivided into several groups, one of which will serve as the control, and the others to be submitted to a definite course of treatment. The course of the condition will be followed both clinically and microbiologically and the investigation promises to yield valuable information.

[*The Lancet*, May 1, 1915.]

FACIAL PLASTIC SURGERY, LARYNGOLOGY, AND STOMATOLOGY, IN FRENCH MILITARY HOSPITALS

[*Impressions de Voyage.*]

By J. Dundas Grant, M. A., M. D., Edin., F. R. C. S., Eng.

At Talence, near Bordeaux, there is a large hospital which forms a centre to which "special" cases are sent. Here nearly one-third of the beds are apportioned to the department of oto-rhino-laryngology for the

18th Region, under Dr. E. J. Moure, the specialist who is so well known as the adviser of the King of Spain. His work, of course, overflows far beyond the ordinary routine of civil practice, and includes a large amount of plastic surgery as well as the removal of portions of projectiles or the treatment of their effects.

The plastic surgery of the face is also illustrated at Talence by a large number of cases under the care of Doctor Dubreuilh.

Among the most striking types of cases to be seen here are those of extensive destruction of the lower jaw. In these we have the disfigurement accompanied by masticatory, articulatory, and salivary trouble; the sufferers unable to take solid food, incapable of intelligible utterance, dribbling and disfigured, present a most woeful appearance. The extraordinary feature is that in spite of all they seem full of the patience, cheerfulness, and buoyancy in the midst of their trouble, which is characteristic of the French soldier. The cheering side of this depressing picture to the medical visitor is the remarkable resourcefulness and keenness of the dental surgeons in the "Service de Stomatologie." I am informed that the science and practice of dentistry are practised with exceptional ardor in the south of France. At all events the Service of Stomatology is a scene of the greatest activity. Most cases of fractured jaw are X-rayed, photographed, modelled in plaster, drawn and painted by workers in military uniform, who seem to give of their best, with all their hearts, in return for their exemption from the sterner work of the field. The main idea is, of course, to patch up the mandible, but in such a way as to ensure coaptation with the maxilla and secure the "bite." There is nothing the military stomatologist seems to resent more than union attempted by means of a wire suture. A cast is taken of the upper jaw and then of the lower one as a whole or often in parts. Metal collars are adapted round the teeth and by their means screw apparatuses are attached for pressing the fragments asunder if they override, or elastics for drawing an outwardly displaced fragment in toward the middle line. Inclined planes ("buttoirs") formed of gilded metal are often used with the same object. The ultimate adaptation of a prothesis with artificial teeth is the main end from the physiological point of view and no doubt it is often attained. The benefit from the æsthetic aspect is also unquestionable. Our own dental surgeons are not at all likely to be behindhand in this class of work, but the hasty glance of the stomatological activity exercised at Talence impressed me with the importance of the dentist's work and of the lofty position it should hold in our scheme of care for the wounded, which I had not hitherto realized. It is only to be desired that every encouragement should be given to our stomatological colleagues on the part of the authorities, fellow surgeons, and money providers. They will require much

room, much mechanical assistance, and much material, including metal both precious and other.

The enormous number of French in the field has, of course, provided an amount of material such as we—perhaps happily—are unable to command and *the agmination of cases of special character in "centres"* allows of a concentrated study of their nature and requirements such as we can scarcely obtain at home. I cannot help thinking that a visit to one or more of the "centres" in France in a somewhat less casual way than my recent one was made, would be of interest and possibly of profit to those who have to deal with the wounded man for decoration as well as repair.

Cavendish Square, W.

[*The Lancet*, May 22, 1915].

DIFFICULT LABOR AND DENTAL DEFORMITIES

To the Editor of the Lancet:

In reply to a request of Mr. J. F. Colyer, asking for details and models of dental deformities, presumably caused by obstetric operations, the writer states that since 1906, he has been carefully collecting such statistics for a future communication.

Mr. Colyer has under his own care one of the most valuable cases in this connection. At the annual meeting of the International Medical Congress in 1913 at a demonstration meeting at the Dental Hospital he exhibited a boy, an extreme case of mandibular protrusion. In a conversation I had with the mother before the demonstration, and in reply to my inquiry, she informed me that the labor was very prolonged and dangerous, the head being in the *left side*. It was evident that this was a case of transverse presentation, and that the operation of turning had been performed; to do this the operator had exerted sustained and forcible traction by means of the mandible, forcibly straightening this cartilaginous structure at the angle and increasing its length; from this injury it had not recovered.

I cannot claim to be the first in this field; this honor is due to Dr. L. S. Chilcott, whose p er, An Obstetrical Deformity of the Mandible, appeared in the *Dent. Cosmos* in March 1906, but I do believe I am the first to systematically s dy each case of these deformities from the obstetrical standpoint. Doctor Chilcott's case was one of breech presentation, and he contended that the deformity was caused by great pressure upon the angle by the bone of the pelvic outlet, producing an open bite. The angle of the mandible in this case was so obtuse that it had almost disappeared.

The above are both cases of mandibular deformity due to malpresentation. Superior protrusion is much more common, and I have suspected for some time that a small pelvic outlet and the use of the midwifery

forceps, the lateral pressure of which is very powerful, is responsible for many cases of this condition.

My records show that of those cases I have been able to trace the forceps were used in 80 per cent.

I am, Sir, yours faithfully,

Denmark Hill, S. E., May 12th, 1915. FREDERICK LONNON.

TOOTH BRUSH DRILL

(After the form advised by the Second District Dental Association.)

Two or three children provided with tooth brushes, dentifrice, cups, water, and a basin, should demonstrate this drill before the class. Every member of the class should follow the leaders in pantomime.

Attention! (All in line, elbows close to side with brushes in right hand and cups in left.)

1. *Ready*—Dip!
2. *Outside Surfaces* (Brush inserted under cheek, teeth closed.
   Left Side—Ready—Count 1–16. Dip.
   Right side—Ready—Count 1–16. Dip.
   Front side—Ready—Count 1–16. Dip.
3. *Inside Surfaces* (Mouth wide open, straight motion front to back.)
   Upper Left Side—Ready—Count 1–16. Dip.
   Upper Right Side—Ready—Count 1–16. Dip.
   Upper Front Side—Ready—Count 1–16. Dip.
   Lower Left Side—Ready—Count 1–16. Dip.
   Lower Right Side—Ready—Count 1–16. Dip.
   Lower Front Side—Ready—Count 1–16. Dip.
4. *Chewing Surfaces* (scrubbing vigorously.)
   Upper Left Side—Ready—Count 1–16. Dip.
   Upper Right Side—Ready—Count 1–16. Dip.
   Lower Left Side—Ready—Count 1–16. Dip.
   Lower Right Side—Ready—Count 1–16. Dip.
5. Empty Cups and refill them—Ready Count 1–16.
6. Rinse Mouth—Ready—Count 1–16.
7. Rinse Brush—Ready—Count 1–16. (Shaking off excess of water.)

N. B.—Counting by leader should be rather brisk but even and should allow plenty of time for dipping and shaking of the brushes.

Materials.

1. Tooth Brushes (brought to school in envelopes made by pupils).
2. Individual cups (paper preferably) made by children at home, those of the leaders to be half filled with water by monitor.
3. One pitcher of water.
4. One tin basin.—*School Health News.*

SOCIETY NOTES

MASSACHUSETTS.

The Northeastern Dental Association will hold their twenty-first annual meeting in Springfield, Mass., on Oct. 13-15, 1915.—ALVIN A. HUNT, *Secretary.*

MONTANA.

The Montana State Board of Dental Examiners will hold session July 12-15, 1915.—G. A. CHEVIGNY, Butte, Mont., *Secretary.*

Montana State Dental Society, Helena, Mont., July 15-17, 1915.—DR. F. W. ADAMS, Chicago Block, Billings, Montana, *Secretary.*

NEW JERSEY.

The forty-fifth annual convention of the New Jersey State Dental Society, at Asbury Park, July 21-24, 1915; headquarters, Coleman House.—JOHN C. FORSYTH, *Secretary.*

NORTH DAKOTA.

The next regular meeting of the North Dakota State Board of Dental Examiners will be held in the Armory at Fargo, N. Dak., beginning July 13, 1915. All applications must be in the hands of the Secretary by July 3rd. For further particulars write—F. A. BRICKER, Fargo, N. Dak., *Secretary.*

SOUTH DAKOTA.

The next meeting of the South Dakota State Dental Society, will be held at Rapid City, S. Dak., July 22-24, 1915—T. E. JOHNSON, Rapid City, S. Dak., *Secretary.*

UTAH.

Utah State Dental Society will meet in San Francisco, Cal., during the Panama-Pacific Dental Congress in August, 1915.—E. C. FAIRWEATHER, Boston Bldg., Salt Lake City, Utah, *Secretary.*

WISCONSIN.

Wisconsin State Dental Society, Oconomowoc, Wis., July 13-15, 1915.—DR. O. G. KRAUSE, 1209 Wells Bldg., Milwaukee, Wis., *Secretary.*

PANAMA PACIFIC DENTAL CONGRESS

(The itinerary published below is that adopted by the Transportation Committee of the Panama-Pacific Dental Congress.
Comparison of the two will show certain differences.)

The Committee of Organization of the Panama Pacific Dental Congress desires to call the attention of the members of the dental profession to the fact that the Congress will convene on time in San Francisco, on August 30th, under most favorable conditions for holding a large and successful meeting.

The programme of papers and clinics is almost complete and covers in a most comprehensive manner practically every subject pertaining to the practice of dentistry and oral surgery. About one hundred papers and two hundred and fifty clinics, or more, will be presented. Among the leading essayists and clinicians will be, Truman W. Brophy, H. S. Dunning, M. H. Cryer, C. H. Oakman, Rudolph Weiser, of Vienna, Austria; A. B. Baer, T. B. Hartzell, H. M. Sherman, T. E. Carmody, W. H. G. Logan, H. P. Carlton, Professor Bornsdorff, of Finland, E. F. Leffler, Garrett Newkirk, Herbert L. Wheeler, Louis Ottofy, Guy S. Millberry, M. L. Ward, I. N. Broomell, H. E. Friesell, V. A. Lathan, F. B. Noyes, Josef Novitsky, C. H. Wilson, F. W. Hergert, C. J. R. Engstrom, V. E. Mitchell, Hart J. Goslee, J. Leon Williams, Alfred P. Rogers, A. H. Ketcham, E. L. Stanton, Weston A. Price, Louis Subirana, of Madrid, Spain; R. Ottolengui, M. L. Rhein, H. A. Pullen, Vincenzo Guerini, of Italy; Joseph Nalin,

Montreal; W. H. Fitzgerald, Chas. McManus, C. O. Simpson, M. J. Congdon, R. B. Giffen, H. G. Chappel, Th. Weber, of Finland; A. C. Wherry, John V. Conzett, F. W. Gethro, Edwin R. Kibler, Richard H. Riethmuller, T. Sydney Smith, Robin Adair, H. Page Bailey, Wm. A. Capon, L. P. Haskell, Jules J. Sarrazin, V. H. Jackson, W. H. O. McGehee, Arthur C. Peck, E. A. Bogue, and many others.

As far as possible no night sessions of the Congress will be held, leaving the evenings free for entertainment and the Exposition.

Over 1,200 front feet of space will be occupied by the leading dealers and manufacturers of the world with one of the most comprehensive exhibits of dental and pharmaceutical goods ever shown.

All the sessions of the Congress, the meetings of the sections, component societies, and the exhibits, will be held under one roof, in the Municipal Auditorium, one of the most magnificent structures of its kind, affording every opportunity for the effective and comfortable presentation of the programme.

No one interested in the history, progress, and practice of dental science can afford to miss this great opportunity to attend the congress and at the same time visit the greatest International Exposition the world has ever seen.

THE OFFICIAL TRAIN SCHEDULE TO THE PANAMA PACIFIC DENTAL CONGRESS, SAN FRANCISCO, CAL., AUGUST 30TH—SEPT. 9TH, 1915

TRANSPORTATION COMMITTEE—PANAMA PACIFIC DENTAL CONGRESS

Dr. Henry Woods Weirick, Chairman, 503–6 Mechanics Building, San Francisco, Cal.
Dr. Harry P. Evans, 44 East 64th St., New York City.
Dr. E. M. Carson, 1115 Union Building, Seattle, Wash.
Dr. Chas. F. Fiset, Cobb Building, Seattle, Wash.
Dr. J. D. Eby, 519 Grant Building, Atlanta, Ga.
Dr. Alpheus R. Brown, 201 Clarendon St., Boston Mass.
Dr. R. W. Berthel, Lowry Arcade, St. Paul, Minn.
Dr. F. W. Gethro, 132 S. Michigan Avenue, Chicago, Ill.

OFFICERS OF THE PANAMA PACIFIC DENTAL CONGRESS

President, Dr. Frank L. Platt, 323 Geary St., San Francisco, Cal.
Vice-President, Dr. Chas. M. Benbrook, Auditorium Bldg., Los Angeles, Cal.
Secretary, Dr. Arthur M. Flood, 240 Stockton St., San Francisco, Cal.
Treasurer, Dr. Fred G. Baird, Butler Bldg., San Francisco, Cal.

THE CONGRESS

The Panama Pacific Dental Congress was organized by the dentists of a half a dozen Western states for the purpose of bringing together representatives of the dental profession from all over the world for their mutual benefit, to renew old acquaintances, form new friendships, to promote their many interests and to accomplish all these purposes on a basis of good fellowship among the men and women of the profession. At the time of the holding of this ten days' Congress, the annual meetings of "The Federation Dentaire International," "The American Society of Orthodontists," "California State Dental Association," "Southern California State Dental Society," "Salt Lake County Dental Society," "Delta Sigma Delta," "Psi Omega" and "Xi Psi Phi" dental fraternities and other meetings will take place.

About one hundred papers will be read by leading men on topics new and old, but up to date. There will be eight days' clinics—both chair and table—practical demonstrations in everything modern in dentistry by prominent operators in the profession. 35,000 square feet of floor space of the main Auditorium will be devoted to Manufacturers' and Dealers' Exhibits, displaying and demonstrating every appliance and material devoted to modern dentistry. A complete exhibit of everything that pertains to Oral and School Hygiene and Sanitation will be

given a prominent place. All will be held in San Francisco's New Auditorium, five minutes' ride from the hotel and business sections of the city.

Every progressive dentist should accept this invitation to the Greatest Dental Congress ever held—an invitation extended by the dentists of this section to the profession of the world.

THE TOUR

The Transportation Committee of the Panama Pacific Dental Congress has endeavored to furnish schedule of train service which will afford the greatest amount of comfort, sight-seeing and pleasure, with the least amount of fatigue and inconvenience at a minimum of expense for all these coming from eastern points. In order to meet the desires of the dentists, their families and friends wishing to attend this Congress, we have deemed it best to adopt the following schedules:

Lv.	Boston	12:00 M.	August	22nd	Via	N. Y. N. H. & H. R. R.
Ar.	New York	7:00 A. M.	"	23rd	"	"

Change from Grand Central to the Pennsylvania Station

Lv.	New York	2:04 P. M.	August	23rd	Via	Pennsylvania R. R.
"	Newark	2:37 P. M.	"	"	"	"
"	Philadelphia	4:31 P. M.	"	"	"	"
"	Harrisburg	7:25 P. M.	"	"	"	"
"	Altoona	11:00 P. M.	"	"	"	"
"	Pittsburgh	1:35 A. M.	"	24th	"	"
"	Columbus	7:00 A. M.	"	"	"	"
"	Logansport	1:15 P. M.	"	"	"	"
Ar.	Chicago	5:00 P. M.	"	"	"	"

Train to be switched to Chicago & Northwestern Station. A few hours for sight-seeing and recreation in Chicago.

Lv.	Chicago	10:45 P. M.	August	24th	Via	Chicago & North Western
"	Cedar Rapids	6:00 A. M.	"	25th	"	"
"	Marshalltown	8:18 A. M.	"	"	"	"
"	Ames	9:50 A. M.	"	"	"	"
Ar.	Omaha	3:45 P. M.	"	"	"	"
Lv.	"	4:20 P. M.	"	"	"	Union Pacific Railway
"	Grand Island	9:30 P. M.	"	"	"	"
Ar.	Denver	7:30 A. M.	"	26th	"	"
Lv.	"	7:45 A. M.	"	"	"	Denver & Rio Grande
Ar.	Colorado Springs	10:30 A. M.	"	"	"	"

Spend day and night here for sight-seeing.

Lv.	Colorado Springs	10:55 A. M.	August	27th	Via	Denver & Rio Grande
"	Royal Gorge	1:50 P. M.	"	"	"	"
"	Glenwood Springs	10:10 P. M.	"	"	"	"
Ar.	Salt Lake City	12:01 Noon	"	28th	"	"
Lv.	"	1:45 P. M.	"	"	"	Western Pacific Ry.
"	Feather River Canyon	7:00 A. M.	"	29th	"	"
Ar.	San Francisco	5:45 P. M.	"	"	"	"

PASSENGERS FROM FOLLOWING POINTS SHOULD LEAVE AS FOLLOWS TO JOIN SPECIAL TRAIN

Lv.	Washington	3:10 P. M.	August	23rd	Via	Pennsylvania Ry.
"	Baltimore	4:20 P. M.	"	"	"	"
Ar.	Harrisburg	6:40 P. M.	"	"	"	"
Lv.	Louisville	8:20 A. M.	August	24th	"	"
"	Indianapolis	11:40 A. M.	"	"	"	"
Ar.	Chicago	5:40 P. M.	"	"	"	"
Lv.	Dayton	9:05 A. M.	August	24th	Via	Pennsylvania Ry.
Ar.	Chicago	5:40 P. M.	"	"	"	"
Lv.	Cleveland	7:20 A. M.	"	"	"	Lake Shore Railway
"	Toledo	10:05 A. M.	"	"	"	"
Ar.	Chicago	4:00 P. M.	"	"	"	"

Lv. Buffalo . . .	11:00 P. M.	August	23rd	Via	Lake Shore Railway
Ar. Chicago . . .	11:50 A. M.	"	24th	"	"
Lv. Detroit . . .	12:50 P. M.	"	24th	"	Michigan Central Ry.
Ar. Chicago . . .	7:40 P. M.	"	"	"	"
Lv. Minneapolis . .	10:05 P. M.	"	"	"	Chicago & North Western
" St. Paul . . .	10:40 P. M.	"	"	"	"
" Sioux City . .	7:50 A. M.	"	25th	"	"
Ar. Omaha . . .	11:25 A. M.	"	"	"	"
Lv. Des Moines . .	8:30 A. M.	"	"	"	"
Ar. Ames	9:35 A. M.	"	"	"	"
Lv. St. Louis . .	Evening	"	24th	"	Any Line
" Kansas City . .	"	"	"	"	"
Ar. Omaha . . .	Morning	"	25th	"	"

RAILROAD FARES

Going via the route of the Official Train to San Francisco, Cal., thence returning via any direct line from California, rates will be as follows: From Boston, $106.75. From New York City, $98.80. From Philadelphia, $95.20. From Chicago, $62.50. Going via route of Official Train to San Francisco, thence to Los Angeles and returning via North Pacific Coast (Portland, Seattle or Vancouver), the cost will be $17.50 higher (destination of tickets, San Francisco), with an additional charge of $4.00 if side trip Los Angeles to San Diego and return is desired. The entire route must be selected at the time tickets are purchased. Correspondingly low rates from your home station.

SLEEPING CAR RATES TO SAN FRANCISCO

From	Lower	Upper	Compartment	Drawing Room
New York City	$20.00	$16.00	$56.00	$71.00
Philadelphia	19.00	15.60	55.00	69.00
Chicago	15.00	12.00	42.00	53.00
Omaha	13.00	10.40	36.50	46.00

GENERAL INFORMATION

In order to secure sleeping car accommodations it will be necessary to make application as soon as possible.

On account of the heavy travel it would be advisable to make hotel reservations in advance and these can be secured through the Official Exposition Hotel Bureau, Flannery Building, San Francisco, Cal.

Literature descriptive of the route of travel, the Expositions, etc., will be sent you on request.

Any of the representatives of any of the railroads named in the itinerary will be pleased to assist in arranging your trip and make whatever sleeping car reservations you may require.

THE NEXT MEETING OF THE UTAH STATE DENTAL SOCIETY

The Utah State Dental Society desires to entertain all dentists who visit Salt Lake or Ogden, and the committee would be very glad to be notified of the time of arrival of dentists either individually or collectively, in order that arrangements may be made for fraternal greetings and entertaining. EARL G. VAN LAW, Chairman Entertainment Committee, 913-15 Walker Bank Bldg., Salt Lake City, Utah.

EXAMINATION OF DENTISTS FOR THE U. S. ARMY

The Surgeon General of the Army announces that examinations for the appointment of Acting Dental Surgeons will be held at Fort Slocum, New York; Columbus Barracks, Ohio; Jefferson Barracks, Missouri; Fort Logan, Colorado; and Fort McDowell, California, on Monday, October 18, 1915.

Application blanks and full information concerning these examinations can be procured by addressing the "Surgeon General, U. S. Army, Washington, D. C."

The essential requirements to securing an examination are that the applicant shall be a citizen of the United States, shall be between 21 and 27 years of age, a graduate of a dental school legally authorized to confer the degree of D.D.S., and shall be of good moral charac ter and habits.

Acting Dental Surgeons are employed under a three years' contract, at the rate of $150.00 per month. They are entitled to traveling allowances in obeying their first orders, in changing stations, and in returning to their homes at termination of service. They also have a privilege of purchasing certain supplies at the Army commissary. After three years' service, if found qualified, they are promoted to the grade of dental surgeon with the rank of first lieutenant, and receive thereafter the pay and allowances appertaining to that rank.

In order to perfect all necessary arrangements for the examination, applications must be in the possession of the Surgeon General at least two weeks before the date of examination. Early attention is therefore enjoined upon all intending applicants. There will be twelve vacancies to be filled.

FUTURE EVENTS

July 1–3, 1915.—Maine Board of Dental Examiners, State House, Augusta, Me.—I. E. PENDLETON, *Secretary.*

July 6, 1915.—Idaho State Board of Dental Examiners, Boise, Idaho.—ALBERT A. JESSUP, *Secretary.*

July 13, 1915.—North Dakota State Dental Board, held in the Armory, Fargo, N. D.—F. A. BRICKER, *Secretary.*

July 13, 1915.—The South Dakota State Board of Dental Examiners will hold its next meeting at Sioux Falls, S. D.—ARIS L. REVELL, Lead, S. D., *Secretary.*

July 13–15, 1915.—Wisconsin State Dental Society, Oconomowoc, Wis.—O. G. KRAUSE, *Secretary.*

July 21–24, 1915.—Forty-fifth annual convention of the New Jersey State Dental Society, Asbury Park; headquarters, Coleman House.—JOHN C. FORSYTH, *Secretary.*

July 22–24, 1915.—South Dakota State Dental Society, Rapid City, S. D.—B. H. HARMS, *Chairman Exhibit Committee.*

August, 1915.—Utah State Dental Society, San Francisco, Cal., during the Panama-Pacific Dental Congress.—DR. E. C. FAIRWEATHER, Boston Bldg., Salt Lake City, Utah, *Sec'y.*

August 30,–Sept. 1–9, 1915.—Panama-Pacific Dental Congress, San Francisco, Cal.—ARTHUR M. FLOOD, 240 Stockton St., San Francisco, Cal., *Secretary.*

September 2–3, 1915.—International Dental Federation, San Francisco, Cal.; headquarters will be at The Clift Hotel.—TRUMAN W. BROPHY, *President;* BURTON LEE THORPE, 3605 Lindell Blvd., St. Louis, Mo., *Assistant Secretary.*

October 13–15, 1915.—Northeastern Dental Association, Springfield, Mass.—ALVIN A. HUNT, *Secretary.*

November 4–6, 1915.—Virginia State Dental Association, Richmond.—C. B. GIFFORD, Norfolk, Va., *Secretary.*

December 7–9, 1915.—Ohio State Dental Society, Columbus, O.—F. R. CHAPMAN, *Secretary.*

January 25–27, 1916.—American Institute of Dental Teachers, Minneapolis, Minn.—J. F. BIDDLE, *Secretary-Treasurer.*